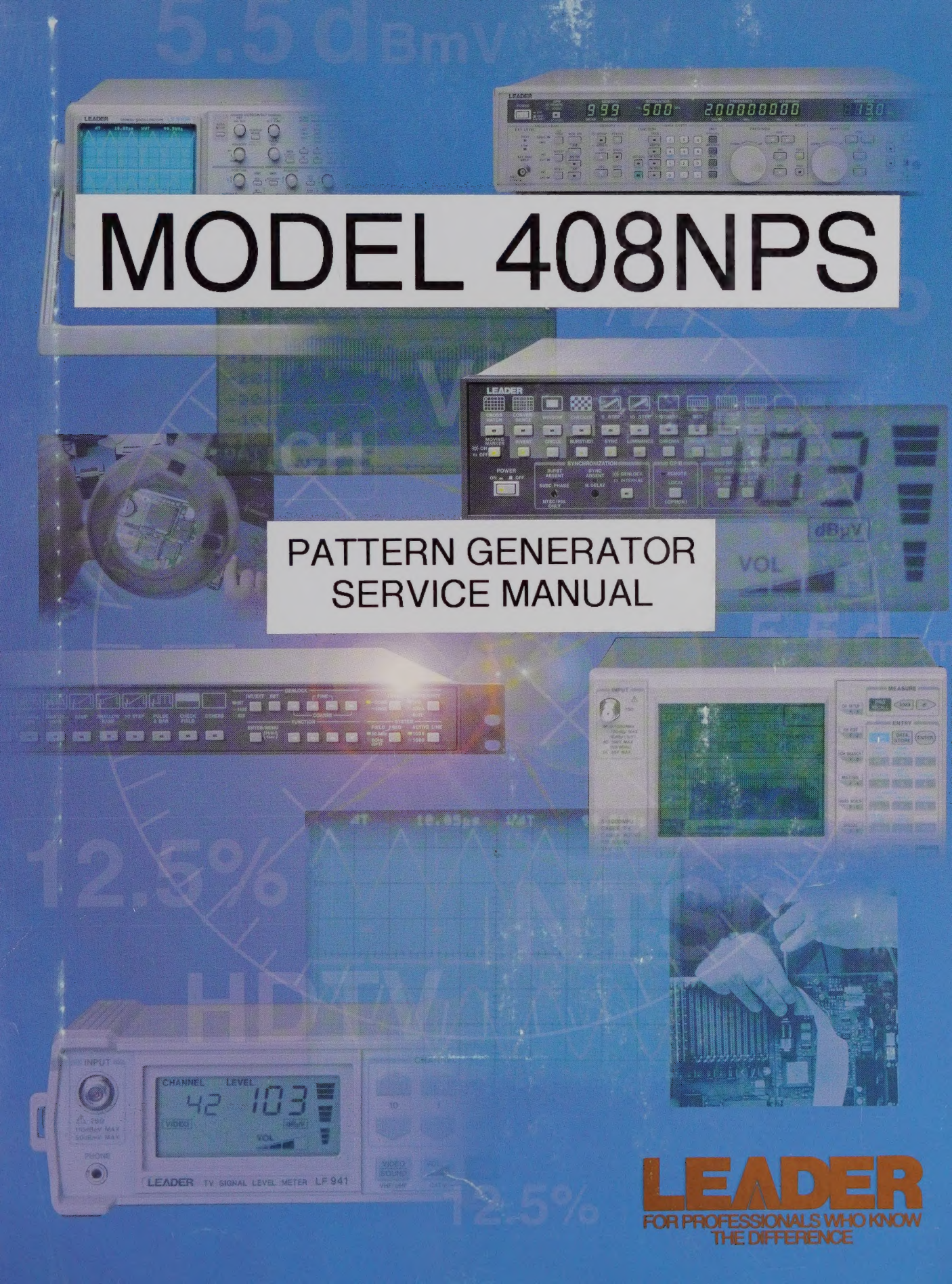
MODEL 408NPS

PATTERN GENERATOR SERVICE MANUAL



LEADER

FOR PROFESSIONALS WHO KNOW THE DIFFERENCE

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MODEL 408NPS

PATTERN GENERATOR

SERVICE MANUAL

WARNING

This service manual is for use by qualified personnel only. To avoid electrical shock, do not perform any service in this manual unless qualified to do so.

LEADER INSTRUMENTS CORPORATION

3.6.7 Setup Level..... 3-22
3.6.8 Y Level..... 3-22
3.6.9 APL..... 3-23
3.6.10 SCH..... 3-24
3.6.11 Front Porch..... 3-26
3.6.12 R-Y, B-Y, Y..... 3-26
3.6.13 Y, C, Y/C..... 3-28
3.6.14 Analog RGB..... 3-30
3.6.15 Circle Pattern..... 3-32
3.6.16 Sound..... 3-33
3.7 SECAM D/A Converter and Filter..... 3-34
3.7.1 Chroma Filter..... 3-34
3.7.2 Chroma Level..... 3-34
3.7.3 Y/C Delay..... 3-35
3.8 Multiburst/Sweep Mode..... 3-36
3.8.1 Triangle Wave..... 3-36
3.8.2 Sine Wave..... 3-37
3.8.3 NTSC..... 3-37
3.8.4 PAL..... 3-39
3.8.5 SECAM..... 3-40
3.9 RF Output..... 3-41
3.9.1 Reference Frequency..... 3-41
3.9.2 SIF-VCO..... 3-41
3.9.3 Video Modulation..... 3-41
3.9.4 Lineality Check..... 3-44

4. ADJUSTMENT LOCATIONS..... 4-1
Top View..... 4-1
Bottom View..... 4-2
T-5205 CPU Board..... 4-3
T-5204 GEN/INT Board..... 4-4
T-5202 Analog Board..... 4-5
T-5201 Sweep/Multi Board..... 4-6
T-4603 Power Board..... 4-7
T-5203 RF Board..... 4-8
T-5091 SECAM Chroma D/A Board..... 4-9
T-5092 SECAM Chroma Filter Board..... 4-10

5. PRINTED CIRCUIT BOARD..... 5-1
T-5205 CPU Board..... 5-1
T-5204 GEN/INT Board..... 5-2
T-5202 Analog Board..... 5-3
T-4972 SUB (AMP) 1 Board..... 5-4
T-4973 SUB (AMP) 2 Board..... 5-4
T-5201 Sweep/Multi Board..... 5-4
T-4604 Panel Board..... 5-5
T-4603 Power Board..... 5-5
T-4674 RF Level Board..... 5-6
T-4767 H. Delay Board..... 5-6
T-4772 D. SUB Board..... 5-6
T-5203 RF Board(Component side)..... 5-7
T-5203 RF Board(Soldering side)..... 5-8
T-4608 SUB Phase Board..... 5-9
T-4610 MB Control D/A Board..... 5-9
T-4613 Chroma D/A Board..... 5-9
T-4614 Y D/A Board..... 5-10
T-4734 Chroma D/A Board..... 5-10
T-4771 Y. Filter Board..... 5-10
T-5165 Pulse Amp Board..... 5-10
T-5091 SECAM Chroma D/A Board..... 5-11
T-5092 SECAM Chroma Filter Board..... 5-12
T-5532 CPU-SUB Board..... 5-13
T-5231 Sweep Control Board..... 5-13
T-5232 Chroma Ref Board..... 5-13
T-5234 Y Ref Board..... 5-13
T-5235 Sync Ref Board..... 5-13
T-5237 Y/C Board..... 5-13

6. BLOCK DIAGRAM/SCHEMATIC DIAGRAM..... 6-1
001 Block Diagram..... 6-1
021 Power Supply..... 6-2
031-032 Panel..... 6-3
041-057 CPU..... 6-5
061-068 Genlock..... 6-22
071 SUBC Phase..... 6-30
081-098 Analog..... 6-31
101 Multiburst Control D/A..... 6-49
102 Chroma D/A..... 6-50
103 Chroma D/A 2..... 6-51
104 Y D/A..... 6-52
105 Y Filter..... 6-53
106 Pulse Amp..... 6-54
111-113 Multiburst/Sweep..... 6-55
121-123 SECAM D/A..... 6-58
132 SECAM LPF..... 6-61
141-145 RF..... 6-62
151 RF Level Control..... 6-67

7. CABINET REMOVAL..... 7-1

8. PARTS LIST..... 8-1

1. SPECIFICATIONS

1.1 Color Systems

NTSC-M
PAL-B, C, D, G, H, I, K, L
SECAM III-B, C, D, G, K, L

1.2 Patterns

•Crosshatch	White lines (15 x 11) on black background with white corner marker (100%) at upper left corner of the screen.
•Convergence	100% white lines (15x11) on black background with 100% white dots (14x10)
•Window	100% white window on black background
•Checker	100% white and black checker (8x6)
•5 Step	Staircase, 5 equal luminance steps B-Y axis 40% (NTSC: 286mVp-p, PAL: 280mVp-p) chroma signal on/off selectable SECAM: White chroma signal on/off selectable
•10 Step	Staircase, 10 equal luminance steps B-Y axis 40% (NTSC: 286mVp-p, PAL: 280mVp-p) chroma signal on/off selectable SECAM: White chroma signal on/off selectable
•Others	Several patterns selectable

•Demodulator Pattern

	Chroma phase
NTSC	
Upper half of screen	
n line	R-Y, -(R-Y), B-Y, -(B-Y)
	R-Y, -(R-Y), B-Y, -(B-Y)
n+1 line	-(R-Y), R-Y, B-Y, -(B-Y)
	R-Y, -(R-Y), -(B-Y), B-Y
Lower half of screen	
n line	I, -I, Q, -Q, I, -I, Q, -Q
n+1 line	-I, I, Q, -Q, I, -I, -Q, Q
PAL	
n line	R-Y, -(R-Y), B-Y, -(B-Y)
	R-Y, -(R-Y), B-Y, -(B-Y)
n+1 line	-(R-Y), R-Y, B-Y, -(B-Y)
	R-Y, -(R-Y), -(B-Y), B-Y
SECAM	No DEM pattern

•Full-Field Color Bars

75% amplitude color bars
The eight color bars on the screen from left to right; white, yellow, cyan, green, magenta, red, blue and black
75% or 100% white, selectable

•SMPTE Color Bars

NTSC	Conforms to SMPTE ECR 1-1978 specifications
PAL, SECAM	Applied NTSC test pattern (SMPTE ECR 1-1978) to PAL and SECAM system.

•Raster Eight colors in RGB combinations

•Multiburst

Frequency	
NTSC	0.5MHz, 1MHz, 2MHz, 3MHz, 3.58MHz, 4.2MHz fixed or variable (1MHz to 15MHz)
PAL, SECAM	0.5MHz, 1MHz, 2MHz, 4MHz, 4.8MHz, 5.8MHz fixed or variable (1MHz to 15MHz)
Amplitude	50% or 100%, selectable
Flatness	Within ±0.5dB (0.5MHz to 10.0MHz) Within ±1.0dB (10.1MHz to 15.0MHz)

•Video Sweep

Sweep frequency range	
	NARROW: 0.1MHz to 5MHz WIDE: 0.3MHz to 15MHz Two bands, selectable
Sweep speed	Synchronized with field
Amplitude	50% or 100%, selectable
Flatness	Within ±0.5dB (0.1MHz to 10.0MHz) Within ±1.0dB (10.1MHz to 15.0MHz)
Marker	
NARROW	
NTSC	0.5MHz, 1MHz, 2MHz, 3MHz, 3.58MHz, 4.2MHz
PAL,SECAM	0.5MHz, 1MHz, 2MHz, 3MHz, 4MHz, 5MHz
WIDE	2MHz, 4MHz, 6MHz, 8MHz, 10MHz, 12MHz, 14MHz
Accuracy	± (3% + 50kHz)

1.3 Sync Signal

•NTSC-M

Number of scanning lines	525 (Interlace)
Line frequency	15.734kHz
Field frequency	59.94Hz

•PAL-B, C, D, G, H, I, K, L

Number of scanning lines	625 (Interlace)
Line frequency	15.625kHz
Field frequency	50Hz

•SECAM III-B, C, D, G, K, L

Number of scanning lines	625 (Interlace)
Line frequency	15.625kHz
Field frequency	50Hz

1.4 Mode Control

White	Selects white level of color bars/raster to 75% or 100%
Red	Red signal on/off for color bars/raster
Green	Green signal on/off for color bars/raster
Blue	Blue signal on/off for color bars/raster
Burst	Burst signal on/off
Sync	Sync signal on/off
Luminance	Luminance signal on/off
Chrominance	Chrominance signal on/off
Invert	Black-and-white inversion of crosshatch, convergence, window, and checker patterns
Circle	Combines circle to crosshatch, convergence, window, or checker pattern
Moving Marker	Combines moving markers to all patterns

1.5 Amplitude Preset

•Sync

NTSC	0 to 200% (286mV = 100%)
PAL, SECAM	0 to 200% (300mV = 100%)

•Burst

NTSC	0 to 200% (286mV = 100%)
PAL, SECAM	0 to 200% (300mV = 100%)

•Luminance

NTSC	0 to 200% (660mV = 100%)
PAL, SECAM	0 to 200% (700mV = 100%)

•Chrominance

NTSC	0 to 200% (678mV = 100%)
PAL	0 to 200% (664mV, cyan = 100%)
SECAM	0 to 200% (476mV = 100%)
	(SECAM ID and chrominance component: Variable carrier level instead of FM deviation)

•Setup

NTSC	0 to 20.0% (54mV = 7.5%)	(Settable for full-field color bars, SMPTE color bars, and raster. Fixed to 0% for other patterns.)
PAL, SECAM	None	

1.6 Front Panel Outputs

•Composite Video

Polarity	Positive (sync negative)
Voltage	Fixed: 1Vp-p ±28mVp-p (into 75Ω)
	Variable: 0 to 1Vp-p (into 75Ω)
Impedance	75Ω

•Trigger

Mode	HD or VD, selectable
Output level	TTL

•RF

Freq. range	30MHz to 900MHz
Preset freq.	10kHz steps
	Δf function: In the CH mode, center frequency is variable up to ±10.00MHz
Frequency switching time	
	≤2 sec
Flatness	±5dB
Spurious	-10dBc
Voltage	100μV to 10mVrms approx. (into 75Ω) continuously variable
Impedance	75Ω
Mod. polarity	Positive or negative
Accuracy	±50ppm at setting value

•Sound	Superimposed to RF output, on/off selectable
System	Intercarrier
Frequency	
NTSC	4.5MHz ±225Hz
PAL, SECAM	5.5MHz ±275Hz, 6MHz ±300Hz, 6.5MHz ±325Hz, selectable
Mod. signal	Internal 400Hz and 1kHz, external
Mod. system	
NTSC	FM
PAL, SECAM	AM and FM
Freq. range	50Hz to 50kHz, ±1dB
	50kHz to 100kHz, ±3dB

1.7 Rear Panel Outputs

•Composite video	
Polarity	Positive (sync negative)
Voltage	Fixed: 1Vp-p ±28mVp-p (into 75Ω)
	Variable: 0 to 1Vp-p (into 75Ω)
Impedance	75Ω

•Black Burst	
Polarity	Positive (sync negative)
Burst	
NTSC	286mVp-p ±20mVp-p (into 75Ω)
PAL	300Vp-p ±20mVp-p (into 75Ω)
SECAM	None
Impedance	75Ω
Sync signal	
NTSC	286mVp-p ±20mVp-p (into 75Ω)
PAL, SECAM	300mVp-p ±20mVp-p (into 75Ω)
Impedance	75Ω
Connector	BNC, two systems

•Subcarrier	
Frequency	
NTSC	3.579545MHz ±50Hz (±2Hz with option)
PAL	4.43361875MHz ±50Hz (±2Hz with option)
SECAM	None
Voltage	2Vp-p ±0.3Vp-p (into 75Ω)
Impedance	75Ω

•Composite Sync

Polarity	Negative
Voltage	4Vp-p ±0.5Vp-p (into 75Ω)
Impedance	75Ω

•Composite Blanking

Polarity	Negative
Voltage	4Vp-p ±0.5Vp-p (into 75Ω)
Impedance	75Ω

•Burst Flag/Color Blanking

Polarity	Negative
Voltage	4Vp-p ±0.5Vp-p (into 75Ω)
Impedance	75Ω

•V DRIVE

Polarity	Negative
Voltage	4Vp-p ±0.5Vp-p (into 75Ω)
Impedance	75Ω

•H DRIVE

Polarity	Negative
Voltage	4Vp-p ±0.5Vp-p (into 75Ω)
Impedance	75Ω

•Sound

Frequency	400Hz ±20Hz, 1kHz ±50Hz
Voltage	1Vp-p ±50mVp-p (into 1kΩ)
Impedance	1kΩ
Connectors	One each

•R-Y

Voltage	700mVp-p ±28mVp-p (into 75Ω)
Impedance	75Ω

•B-Y

Voltage	700mVp-p ±28mVp-p (into 75Ω)
Impedance	75Ω

•Y

Voltage	1Vp-p ±28mVp-p (into 75Ω) with sync
Impedance	75Ω

•TTL

R G B output	Fan-out 1 (positive logic)
SYNC output	Fan-out 1 (negative logic) H SYNC, V SYNC
Connector	8-pin, rectangular

•Y/C

Voltage	
NTSC	Y: 1Vp-p ±28mVp-p (into 75Ω) (between sync and white) C: 678mVp-p ±24mVp-p (into 75Ω) Chroma level, setup 0%
PAL	Y: 1Vp-p ±28mVp-p (into 75Ω) (between sync and white) C: 664mVp-p ±24mVp-p (into 75Ω) Chroma level
SECAM	Y: 1Vp-p ±28mVp-p (into 75Ω) C: 476mVp-p ±24mVp-p (into 75Ω) Chroma level
Impedance	Y: 75Ω C: 75Ω
Connector	Two systems Y/C: S connector (round miniature connector) Y, C: BNC connector

•RGB MULTI (NTSC)

	Polarity	Voltage	Imp.
VIDEO	Positive(sync neg.)	1Vp-p±42mVp-p(into 75Ω)	75Ω
RGB	Positive	0.7Vp-p±0.1Vp-p(into 75Ω)	75Ω
Sound		0.4Vp-p ±50mVp-p	10kΩ
Ys		L: 0 to 0.4V H: 1 to 3V	75Ω
Ym		L: 0 to 0.4V H: 1 to 3V	75Ω
AV		L: 0 to 0.4V H: 3 to 5V	22kΩ
Connector	21-pin (EIAJ21P)		

•RGB MULTI (PAL)

	Polarity	Voltage	Imp.
VIDEO	Positive(sync neg.)	1Vp-p±42mVp-p(into 75Ω)	75Ω
RGB	Positive	0.7Vp-p±0.1Vp-p(into 75Ω)	75Ω
Sound		1.4Vp-p ±0.2Vp-p	10kΩ
Ys		L: 0 to 0.4V	75Ω
		H: 1 to 3V	
SLOW SW		L: 0 to 2V	10kΩ
		H: 9.5 to 12V	

Connector 21-pin

1.8 Rear Panel Inputs

•EXT VIDEO

Polarity	Positive (sync negative)
NTSC	1Vp-p (into 75Ω)
Impedance	75Ω

•GENLOCK

Configuration	75Ω, loop-through
Sync signal input level range	
NTSC	286mVp-p ±3dB (sync negative)
PAL, SECAM	300mVp-p ±3dB (sync negative)
Horiz. delay	±2μs, variable
Input voltage range	
NTSC	286mVp-p ±3dB
PAL	300mVp-p ±3dB
Subcarrier lockable range	
NTSC	3.579545MHz ±50Hz
PAL	4.43361875MHz ±50Hz
Subcarrier phase	
	0° to 360°, continuously variable
	SECAM V, H sync position: Variable.

•EXT SOUND

Freq. range	50Hz to 100kHz
Input voltage	1Vp-p
Impedance	10kΩ

1.9 Preset Mode

Up to 100 sets of data (e.g., color system, pattern, mode, level, RF frequency, channel) can be stored to internal memory.

1.10 General Specifications

•Power Supply	100V, 120V, 220V, 240V ±10% (changeable with rewiring)	
	Maximum input voltage: 250V	
Frequency	50/60Hz	
Consumption	60VA approx.	
•Temperature	0 to 40°C (operating)	
•Size	426(W) x 88(H) x 400(D) mm	
•Weight	9kg approx.	
•Accessories	BNC-BNC 3C-2V cable, 1m	1
	Fuse	1
	Instruction manual	1

All specifications subject to change without notice.

2. TEST EQUIPMENT REQUIRED

The following test equipment is required for calibration and servicing of the model 408NPS. The suggested specifications are the minimum necessary for proper calibration of this instrument.

Test Equipment	Minimum Specifications
Oscilloscope	Sensitivity: 5mV/div, ≤1% accuracy Bandwidth: 100MHz Frequency measurement capability TV synchronization Low capacitance probe * LEADER Model 3060
Digital Multimeter	Accuracy: ≤1% * LEADER LDM-852
Frequency Counter	8 digits Frequency range: 100MHz * LEADER LDC-825
Color Bar Generator	NTSC Composite video output * LEADER 408 PAL Composite video output * LEADER 408P
Vector/Waveform Monitor	NTSC SCH measurement capability * LEADER 5870 PAL SCH measurement capability * LEADER 5871

Signal Generator	Frequency range: 100kHz - 1000MHz * LEADER 3215
Spectrum Analyzer	Frequency range: 100MHz
RF Millivoltmeter	Frequency range: 100MHz
TV	NTSC, PAL, SECAM
Terminator	Feed-through 75Ω, ≤0.3% * LEADER LT-1551

3. CALIBRATION PROCEDURE

3.1 General

Calibration should be performed after a 30 minutes warm-up period. It should also be confirmed that the instrument is connected to the rated power line voltage.

All adjustments should be completed in the given order, because some adjustments interact with others.

During the adjustment procedure, remove the case only when necessary and replace immediately after making an adjustment. This will maintain all circuits at constant operating temperature.

```
******** WARNING ********
Electrical shock hazards exist inside
this instrument when covers are removed.
**************************
```

3.2 Initial Control Settings

The initial control settings used for each check and adjustment are listed below. Any variations are stated in the applicable procedure.

All keys	Off
VIDEO LEVEL	Fully counterclockwise
RF LEVEL	Fully counterclockwise

3.3 Power Supply

Connect the digital multimeter between test point on the Power Supply Board (T-4603) and chassis and check the voltage as shown in Table below.

Test Point	Voltage		Ripple
TP1	+5V	(+4.75V to +5.25V)	≤10mVp-p
TP3	+5V	(+4.75V to +5.25V)	≤10mVp-p
TP4	+36V	(+31.0V to +38.0V)	≤15mVp-p
TP5	+15V	(+14.25V to +15.75V)	≤10mVp-p
TP7	+15V	(+14.25V to +15.75V)	≤10mVp-p
TP8	-15V	(-14.25V to -15.75V)	≤10mVp-p
TP9	-15V	(-14.25V to -15.75V)	≤10mVp-p

3.4 CPU Check

3.4.1 Entering Test Mode

- Turn power off.
- Hold down the LOCAL key of GPIB, then turn power on.
- Use the NEXT and PREVIEW keys to select the item to be tested in the LCD panel.

3.4.2 Mode Test

(1) VER DISP

- Select the "VER DISP" and press the ENTER key. The following message is displayed.

```
NTSC STANDARD TYPE
        V1.7(13)
```

- V1.7 and (--) indicate the ROM version.
- To escape from the "VER DISP" mode, press the ENTER key.

(2) LED TEST

- Select the "LED TEST" and press the ENTER key.
  The LED sequentially lights from the upper left.

- The MARKER LED lights until the GPIB-REMOTE LED turns off.
  Confirm that all LEDs light after RECALL LED lights.

- To escape from the "LED TEST" mode, press any key after "ANY KEY TO MENU" is displayed on the LCD panel.

(3) KEY TEST

- Select the "KEY TEST" and press the ENTER key.

- Press or rotate the control to check the name is displayed on the LCD panel.

- To escape from the "KEY TEST" mode, press the MENU key.
  The following message is displayed.

```
MENU KEY! TO MENU OK?
 Y:MENU    N:OTHER
```

- Press the MENU key.

(4) RAM TEST

- Select the "RAM TEST" and press the ENTER key.

- "RAM OK" is displayed on the LCD panel.

- To escape from the "RAM TEST" mode, press the ENTER key.

(5) LCD TEST

- Select the "LCD TEST" and press the ENTER key.

- The LCD panel sequentially filled with 0, 1, ---, 9, H. The brightness is switched to Low mode, then High mode.

- The test mode is escaped from the "LCD TEST" automatically.

(6) PATTERN CHECK

- Select the "PATTERN CHECK" and press the ENTER key.

- Connect the TV or oscilloscope to check the pattern.

- The pattern is automatically displayed and corresponding LED lights.
  Since the pattern recalled by using the key is displayed sequentially in the OTHER mode, the OTHER LED lights continuously.

- To escape from the "PATTERN CHECK" mode, press the ENTER key.

(7) DEFAULT

- Select the "DEFAULT" and press the ENTER key.

• To return to the test mode, proceed Section 3.4.1, "Entering Test Mode."

3.5 Genlock Section

All adjustments and test points described in this section are located on the GEN/INT Board (T-5204).

3.5.1 Subcarrier Frequency

- Set
  GENLOCK/INTERNAL INTERNAL

(1) NTSC

- Select NTSC in the menu.
- Connect the frequency counter to J600 or J601.
- Adjust VC500 for a frequency reading of 14.318180MHz within ±20Hz.
- Connect the digital multimeter to TP503.
- Confirm that the voltage reading is +4.5Vdc within ±0.5V.
- Connect the frequency counter to the SUBCARRIER OUTPUT connector on the rear panel via 75Ω terminator.
- Confirm that the frequency reading is 3.5795450MHz within ±50Hz.

(2) SECAM

- Select SECAM in the menu.
- Connect the frequency counter to J600 or J601.
- Adjust VC501 for a frequency reading of 14.18750MHz within ±20Hz.

- Connect the digital multimeter to TP504.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

(3) PAL

- Select PAL in the menu.

- Connect the frequency counter to the SUBCARRIER OUTPUT connector on the rear panel via 75Ω terminator.

- Adjust VC503 for a frequency reading of 4.43361875MHz within ±50Hz.

- Connect the digital multimeter to TP502.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

- Connect the frequency counter to J600 or J601.

- Confirm that the frequency reading is 14.18750MHz within ±20Hz.

- Connect the digital multimeter to TP504.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

3.5.2 Genlock Frequency

- Set
  GENLOCK/INTERNAL GENLOCK

(1) NTSC

- Select NTSC in the menu.

- Apply the black burst signal from the NTSC pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. The external burst frequency should be 3.5795450MHz within ±20Hz.

- The SYNC ABSENT and BURST ABSENT LEDs are turned off when accurate burst frequency is applied.

- Connect the frequency counter to J600 or J601.

- Confirm that the frequency reading is 14.318180MHz within ±20Hz.

- Connect the digital multimeter to TP503.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

- Connect the oscilloscope to the SUBCARRIER OUTPUT connector on the rear panel via 75Ω terminator.

- The subcarrier signal should be locked.

- Connect the digital multimeter to TP502.

- Adjust VC502 for a voltage reading of +4.5Vdc within ±0.5V.

- Connect the oscilloscope to TP502.

- Adjust VR301 for minimum ripple. (Adjust VR300 as required.)

(2) PAL

- Select PAL in the menu.

- Apply the black burst signal from the PAL pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. The external burst frequency should be 4.43361875MHz within ±20Hz.

- The SYNC ABSENT and BURST ABSENT LEDs are turned off when accurate burst frequency is applied.

- Connect the oscilloscope to the SUBCARRIER OUTPUT connector on the rear panel via 75Ω terminator.

- The subcarrier signal should be locked.

- Connect the oscilloscope to TP502.

- Adjust VR300 for minimum ripple. (Adjust VR301 as required.)

- Connect the digital multimeter to TP502.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

- Connect the frequency counter to J600 or J601.

- Confirm that the frequency reading is 14.18750MHz within ±20Hz.

- Connect the digital multimeter to TP504.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

(3) SECAM

- Select SECAM in the menu.

- Apply the black burst signal from the PAL pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. The external burst frequency should be 4.43361875MHz within ±50Hz.

- The SYNC ABSENT LED is turned off when accurate burst frequency is applied.

- Connect the frequency counter to J600 or J601.

- Confirm that the frequency reading is 14.18750MHz within ±20Hz.

- Connect the digital multimeter to TP504.

- Confirm that the voltage reading is +4.5Vdc within ±0.5V.

3.5.3 Subcarrier Level

- Set
  GENLOCK/INTERNAL INTERNAL

- Connect the oscilloscope to the SUBCARRIER OUTPUT connector on the rear panel via 75Ω terminator.

(1) Level-1

- Select NTSC in the menu.

- Adjust VC701 for maximum amplitude with minimum distortion.

- Select PAL in the menu.

- Adjust VC700 for maximum amplitude with minimum distortion.

- Adjust VC701 and VC700 as required.

(2) Level-2

- Select NTSC in the menu.
- Adjust VR701 for an amplitude of 2Vp-p within ±0.2V.
- Select PAL in the menu.
- Confirm that the subcarrier amplitude is 2Vp-p within ±0.2V.

(3) Level Check

- Select NTSC in the menu.
- Confirm that the level difference between GENLOCK and INTERNAL is within ±0.1V.
- Select PAL in the menu.
- Confirm that the level difference between GENLOCK and INTERNAL is within ±0.1V.

3.5.4 Black Burst

(1) Setup Level

- Select NTSC in the menu.
- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.
- Adjust VR801 for a setup level of 54mVp-p within ±5mV.

(2) Sync Level

- Select PAL in the menu.
- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.

- Adjust and check the sync level according to Table below.

System	Adjustment	Sync Level
PAL	VR802	300mVp-p ±20mVp-p
NTSC	-	700mVp-p ±28mVp-p
SECAM	-	300mVp-p ±20mVp-p

(3) Carrier Leakage

a. PAL

- Select PAL in the menu.

- Connect the PAL vector/waveform monitor to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode. Expand the center area with the gain control.

- Adjust VR905 to bring two dots close together.

- Adjust VR904 to position two dots to the center.

- Adjust VR905 and VR904 as required.

b. NTSC

- Select NTSC in the menu.

- Connect the NTSC vector/waveform monitor to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode. Expand the center area with the gain control.

- Confirm that two dots are positioned at the center.

(4) Chroma

Note: This section describes a chroma adjustment, however, the adjustment is very critical. If problem is not evident, never attempt for the following adjustments.

a. NTSC

- Select NTSC in the menu.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.

- Adjust L903 for a time interval between sync and burst of 5.3μs within ±0.2μs as shown Figure 3-1.

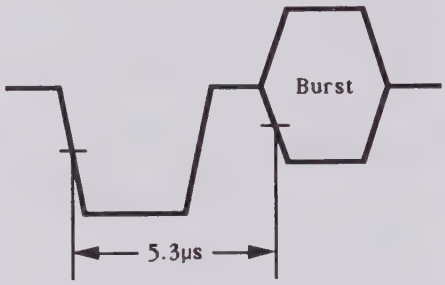


Figure 3-1

- Adjust L902 to obtain symmetrical, 9-cycle burst signal with minimum distortion.

- Adjust VR901 for a burst amplitude of 286mVp-p within ±20mV.

- Adjust L903, L902, and VR701 as required.

- Connect the NTSC vector/waveform monitor with SCH measurement capability to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust VR803 for an SCH reading of 0°.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator

- Confirm that the time interval between sync and burst is 5.3μs within ±0.2μs.

b. PAL

- Select PAL in the menu.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.

- Adjust L905 for a time interval between sync and burst of 5.6μs within ±0.2μs as shown Figure 3-2.

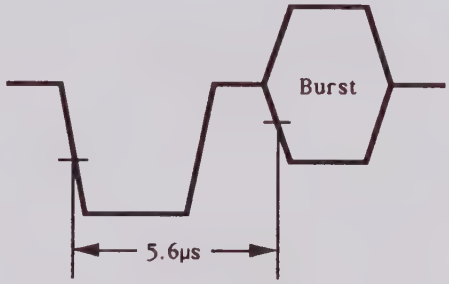


Figure 3-2

- Adjust L904 to obtain a symmetrical burst signal and width of 2.25μs ±0.2μs.

- Adjust VC901 so that the 0° and 90° burst signals are the same amplitude

- Connect the NTSC vector/waveform monitor with SCH measurement capability to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust VR903 for two burst phase of 90°.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.

- Adjust VR902 for a burst amplitude of 300mVp-p within ±20mVp-p.

- Adjust L905, L904, VC901, VR903, and VR902 as required.

- Connect the NTSC vector/waveform monitor with SCH measurement capability to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust VC801 for an SCH reading of 0˚.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator

- Confirm that the time interval between sync and burst is 5.6μs within ±0.2μs.

c. SECAM

- Select SECAM in the menu.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator.

- The output signal is the same as the PAL without burst and chroma signals.

3.5.5 Genlock

(1) NTSC

- Select NTSC in the menu.

- Apply the black burst signal from the external NTSC pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. Confirm that the burst frequency is 3.5795450MHz within ±50Hz, and H sync width is 63.5μs within 0.3μs.

  Connect the GENLOCK INPUT connector of the 408NPS to CH1 INPUT of the oscilloscope via 75Ω terminator.

  Apply the black burst signal from the 408NPS to CH2 INPUT of the oscilloscope via 75Ω terminator.

a. Subcarrier phase

- Rotate the SUBC.PHASE (screwdriver adjustment) and confirm that the burst signal phase varies at least 360° with respect to the external black burst signal.

b. Horizontal delay

- Rotate the H DELAY (screwdriver adjustment) and confirm that the horizontal sync delays at least ±2μs with respect to the sync of the external black burst signal.

c. Burst absent

- Confirm that the BURST ABSENT LED is on and off when the burst of the external black burst signal is turned on and off.

- The signal should be locked when varying the black burst signal level ±6dB.

d. Sync absent

- Confirm that the BURST ABSENT LED and SYNC ABSENT LED are on and off when the sync of the external black burst signal is turned on and off.

- The signal should be locked when varying the sync level ±6dB.

(2) PAL

- Select PAL in the menu.

- Apply the black burst signal from the external NTSC pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. Confirm that the burst frequency is 4.43361875MHz within ±50Hz, and H sync width is 64μs within 0.3μs.

  Connect the GENLOCK INPUT connector of the 408NPS to CH1 INPUT of the oscilloscope via 75Ω terminator.

  Apply the black burst signal from the 408NPS to CH2 INPUT of the oscilloscope via 75Ω terminator.

- Apply the same procedure (Steps "a." through "d.") as the NTSC to check the performance.

(3) SECAM

- Select SECAM in the menu.

- Apply the black burst signal from the external NTSC pattern generator to the GENLOCK INPUT connector on the rear panel via 75Ω terminator. Confirm that the burst frequency is 4.43361875MHz within ±50Hz, and H sync width is 64μs within 0.3μs.

  Connect the GENLOCK INPUT connector of the 408NPS to CH1 INPUT of the oscilloscope via 75Ω terminator.

  Apply the black burst signal from the 408NPS to CH2 INPUT of the oscilloscope via 75Ω terminator.

- Apply the same procedure (steps "b." and "d.") as NTSC to check the performance.

3.6 Analog Section

All adjustments and test points described in this section are located on the Analog Board (T-5202).

3.6.1 Initial Settings

- Hold down the LOCAL key of GPIB, then turn power on. Release the LOCAL key after beeper sounds.

- Select the DEFAULT in the "TEST MODE" and press the ENTER key.

- Turn power off, then turn power on again.

- Select NTSC in the menu.

- Select SETUP in the menu and set it to 7.5%.

3.6.2 Reference Voltage

- Connect the digital voltmeter to TP940.

- Adjust VR940 for a voltage reading of +5.00Vdc.

- Connect the digital voltmeter to TP941.

- Confirm that the voltage is between -1.9V and -2.2V.

- Connect the digital voltmeter to TP942.

- Confirm that the voltage is between +1.2V and +1.5V.

3.6.3 Chroma

- Set

FULL FIELD COLOR	On
WHITE	75%

- Select SETUP in the menu and set it to 7.5%.

(1) Subcarrier Leakage

a. PAL

- Select PAL in the menu.

- Connect the PAL vector/waveform monitor to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust the PHASE control of the vector/waveform monitor for correct phase.

- Disconnect the vector/waveform monitor.
  Adjust the vertical and horizontal controls of the vector/waveform monitor to position the dot at the center.

- Connect the vector/waveform monitor to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust following adjustments to position the four dots at the center.

Adjustment	Positioning
VR401	Sets four dots vertically
VR403	Sets four dots to two groups
VR402	Sets two groups to one group
VR400	Sets one group to the center

b. NTSC

- Select NTSC in the menu.

- Connect the NTSC vector/waveform monitor to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Confirm that the dots are positioned at the center.

(2) Chroma

Note: This section describes a chroma adjustment, however, the adjustment is very critical. If problem is not evident, never attempt for the following adjustments.

a. PAL

- Set
  FULL FIELD COLOR On

- Select PAL in the menu.

- Connect the PAL vector/waveform monitor to the VIDEO OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Confirm that no subcarrier leakage exists.

- Adjust L403 and 404 for a minimum chroma signal distortion

- Adjust VR51 to position the chroma components at each target.

- Adjust VR404 so that the level between R-Y and B-Y is the same.

- Set
  DEM On

- Adjust VC401 so that the phase between R-Y and B-Y is 90°.

b. NTSC

- Set

  FULL FIELD COLOR On

- Connect the NTSC vector/waveform monitor to the VIDEO OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust L401 and 402 to position the chroma components at each target.

- Adjust VR50 to position the chroma components at each target.

- Set

  DEM On

- Adjust L405 and VC400 so that the phase between R-Y and B-Y is 90°.

3.6.4 Burst

- Set

  FULL FIELD COLOR On

  WHITE 75%

- Select SETUP in the menu and set it to 0%.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Select PAL in the menu.

- Adjust VR52 for a burst amplitude of 300mVp-p within ±20mVp-p.

- Select NTSC in the menu.

- Confirm that the burst amplitude is 286mVp-p within ±20mVp-p.

3.6.5 Pedestal Level

- Set

  FULL FIELD COLOR On
  WHITE 75%

- Select SETUP in the menu and set it to 0%.

- Disconnect the J400.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust and check the pedestal level according to Table below.

System	Adjustment	Pedestal Level
NTSC	VR480	0Vdc ±10mV
PAL	-	0Vdc ±10mV
SECAM	-	0Vdc ±20mV

- Connect the J400.

3.6.6 Sync Level

- Set

  FULL FIELD COLOR On
  WHITE 75%

- Select SETUP in the menu and set it to 7.5%.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust and check the sync level according to Table below.

System	Adjustment	Sync Level
PAL	VR350	300mVp-p ±20mVp-p
NTSC	-	286mVp-p ±20mVp-p
SECAM	-	300mVp-p ±20mVp-p

3.6.7 Setup Level

- Set

  FULL FIELD COLOR On
  WHITE 75%

- Select SETUP in the menu and set it to 7.5%.

- Select NTSC in the menu.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust VR351 for a setup level of 54mVp-p within ±5mV.

3.6.8 Y Level

- Set

  FULL FIELD COLOR On
  WHITE 100%

- Select SETUP in the menu and set it to 0%.

- Disconnect the J400.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust and check the 100% white level according to Table below.

System	Adjustment	100% White Level
NTSC	VR100	700mVp-p ±28mVp-p
PAL	-	700mVp-p ±28mVp-p
SECAM*	-	700mVp-p ±28mVp-p

* Chroma off

- Connect the J400.

3.6.9 APL

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Set

  10 STEP On

(1) NTSC

- Select NTSC in the menu.
  The APL is set to 90%.

- Adjust VR101 so that the 100% white level of the raster is the same as 100% white level of the 10 STEP signal.

(2) PAL

- Select PAL in the menu.
  The APL is set to 87.5%.

- Confirm that the 100% white level of the raster is the same as 100% white level of the 10 STEP signal.

(3) SECAM

- Select SECAM in the menu.
  The APL is set to 87.5%.

- Set

  CHROMA Off

- Confirm that the 100% white level of the raster is the same as 100% white level of the 10 STEP signal.

3.6.10 SCH

(1) PAL

- Set

FULL FIELD COLOR	On
WHITE	75%

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Select SETUP in the menu and set it to off.

- Select PAL in the menu.

- Adjust VR352 for a time interval between sync and burst of 5.6μs within ±0.2μs as shown Figure 3-3.

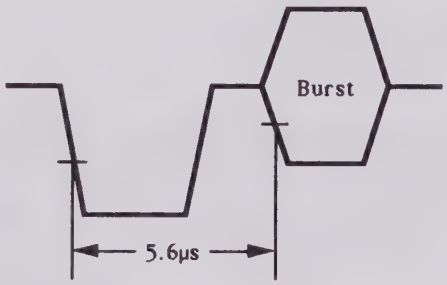


Figure 3-3

- Connect the PAL vector/waveform monitor with SCH measurement capability to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust VR352 again for an SCH reading of 0°.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator

- Confirm that the time interval between sync and burst is 5.6μs within ±0.2μs.

- The sync signal should have no spike or droop.

(2) NTSC

- Select NTSC in the menu.

- Adjust VC350 for a time interval between sync and burst of 5.3μs within ±0.2μs as shown Figure 3-4.

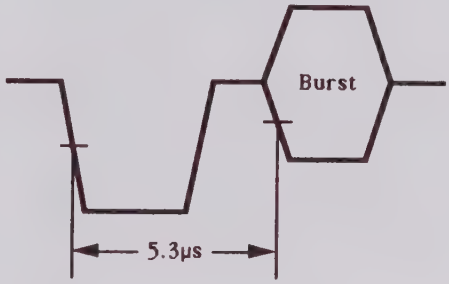


Figure 3-4

- Connect the NTSC vector/waveform monitor with SCH measurement capability to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator and select the vectorscope mode.

- Adjust VC350 again for an SCH reading of 0˚.

- Connect the oscilloscope to the BLACK BURST OUTPUT connector on the rear panel via 75Ω terminator

- Confirm that the time interval between sync and burst is 5.3μs within ±0.2μs.

- The sync signal should have no spike or droop.

3.6.11 Front Porch

- Set

FULL FIELD COLOR	On
WHITE	75%

- Select SETUP in the menu and set it to 7.5%.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust VR353 for a time interval between setup and sync of 1.5μs within ±0.1μs as shown Figure 3-5.

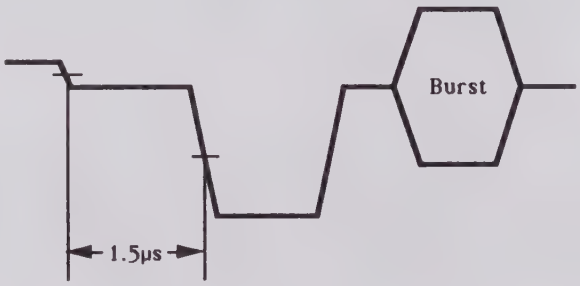


Figure 3-5

3.6.12 R-Y, B-Y, Y

- Set

FULL FIELD COLOR	On
WHITE	100%

- Select SETUP in the menu and set it to 0%.

(1) R-Y Level

- Connect the oscilloscope to the R-Y connector on the rear panel via 75Ω terminator.

- Adjust and check the R-Y level according to Table below. See Figure 3-6 (a).

System	Adjustment	R-Y Level
NTSC	VR750	700mVp-p ±28mVp-p
PAL	-	700mVp-p ±28mVp-p
SECAM	-	700mVp-p ±28mVp-p

(a) R-Y (b) B-Y

Figure 3-6

(2) B-Y Level

- Connect the oscilloscope to the B-Y connector on the rear panel via 75Ω terminator.

- Adjust and check the B-Y level according to Table below. See Figure 3-6 (b).

System	Adjustment	B-Y Level
NTSC	VR751	700mVp-p ±28mVp-p
PAL	-	700mVp-p ±28mVp-p
SECAM	-	700mVp-p ±28mVp-p

(3) Y Level

- Connect the oscilloscope to the Y connector on the rear panel via 75Ω terminator.

- Adjust and check the Y level according to Table below. See Figure 3-7.

System	Adjustment	Y Level
NTSC	VR502	1Vp-p ±28mVp-p
PAL	-	1Vp-p ±28mVp-p
SECAM	-	1Vp-p ±28mVp-p

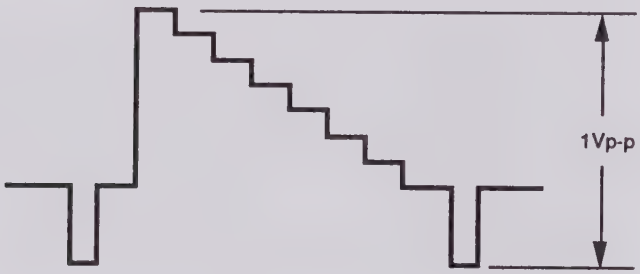


Figure 3-7

3.6.13 Y, C, Y/C

- Set

  FULL FIELD COLOR On

  WHITE 75%

- Select SETUP in the menu and set it to 0%.

(1) Y Level

- Connect the oscilloscope to the Y connector on the rear panel via 75Ω terminator.

- Check the Y level according to Table below. See Figure 3-7.

System	Y Level
NTSC	1Vp-p ±28mVp-p
PAL	1Vp-p ±28mVp-p
SECAM	1Vp-p ±28mVp-p

(2) C Level

- Connect the oscilloscope to the C connector on the rear panel via 75Ω terminator.

- Adjust and check the C level according to Table below. See Figure 3-8.

System	Adjustment	C Level (Cyan, Red)
NTSC	VR503	678mVp-p ±24mVp-p
PAL	-	664mVp-p ±24mVp-p

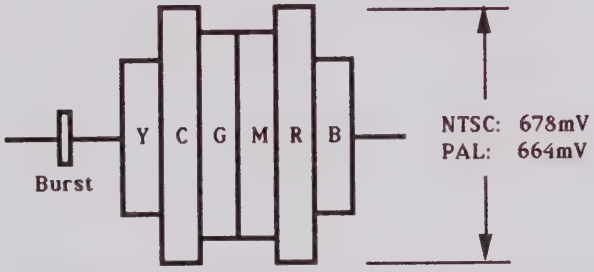


Figure 3-8

(3) Y/C Delay

- Connect the oscilloscope to the Y/C connector on the rear panel as follows via 75Ω terminator.

  CH1: Chroma output, pin 4 (lower right)
  CH2: Y output, pin 3 (lower left)

- Check the Y/C delay according to Table below. See Figure 3-9.

System	Y/C Delay
NTSC	0 sec ≤100ns
PAL	0 sec ≤100ns

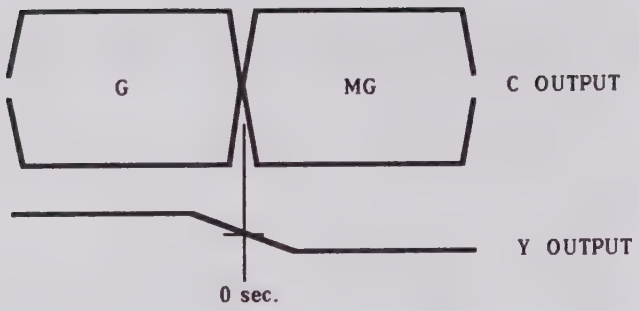


Figure 3-9

3.6.14 Analog RGB

- Set

FULL FIELD COLOR	On
WHITE	75%

- Select SETUP in the menu and set it to 0%.

(1) R Level

- Connect the oscilloscope to the R OUTPUT (pin 15) of the RGB MULTI (NTSC) connector on the rear panel via 75Ω terminator.

- Adjust VR851 for an amplitude of 700mVp-p within ±28mVp-p.
  See Figure 3-10 (a).

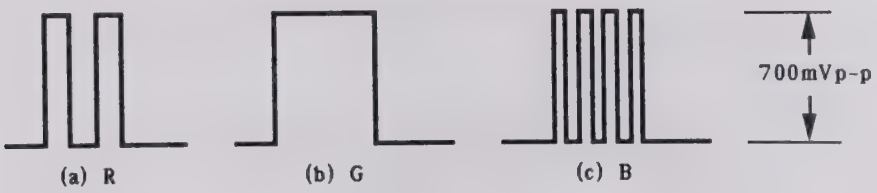


Figure 3-10

(2) G Level

- Connect the oscilloscope to the G OUTPUT (pin 19) of the RGB MULTI (NTSC) connector on the rear panel via 75Ω terminator.

- Adjust VR852 for an amplitude of 700mVp-p within ±28mVp-p.
  See Figure 3-10 (b).

(3) B Level

- Connect the oscilloscope to the B OUTPUT (pin 20) of the RGB MULTI (NTSC) connector on the rear panel via 75Ω terminator.

- Adjust VR853 for an amplitude of 700mVp-p within ±28mVp-p.
  See Figure 3-10 (c).

(4) Staircase Level

- Select OTHERS "MATRIX" in the menu.

- Connect the oscilloscope to the R OUTPUT (pin 15) of the RGB MULTI (NTSC) connector on the rear panel via 75Ω terminator.

- Adjust VR850 so that the 100% white level of the raster is the same as 100% white level of the 10 STEP signal.
  See Figure 3-11.

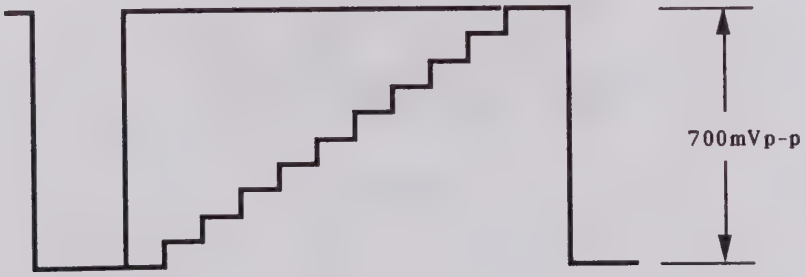


Figure 3-11

3.6.15 Circle Pattern

- Set

CHECKER	On
CIRCLE	On

- Connect the TV to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

(1) NTSC

- Select NTSC in the menu.

- Adjust following adjustments for correct circle pattern. See Figure 3-12.

Adjustment	Function
VR705	Roundness
VR706	Size
VR704	Line thickness
VR702	Horizontal position
VR703	Vertical position
VR261*	Circle blanking

* CPU Board, T-5205

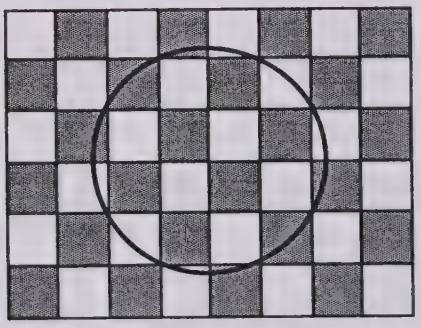


Figure 3-12

(2) PAL

- Select PAL in the menu.

- Adjust following adjustments for correct circle pattern. See Figure 3-12.

Adjustment	Function
VR700	Roundness
VR701	Size
VR708	Horizontal position
VR709	Vertical position

3.6.16 Sound

(1) 1kHz

- Connect the oscilloscope to the SOUND OUTPUT 1kHz connector on the rear panel.

- Adjust VR800 for an amplitude of 2Vp-p within ±0.02V.

- Connect the frequency counter to the SOUND OUTPUT 1kHz connector.

- Confirm that the frequency reading is 1kHz within ±50Hz.

(2) 400Hz

- Connect the oscilloscope to the SOUND OUTPUT 400Hz connector on the rear panel.

- Adjust VR801 for an amplitude of 2Vp-p within ±0.02V.

- Connect the frequency counter to the SOUND OUTPUT 400Hz connector.

- Confirm that the frequency reading is 400Hz within ±20Hz.

3.7 SECAM D/A Converter and Filter

3.7.1 Chroma Filter

Note: This section describes a chroma filter adjustment, however, the adjustment is very critical. If problem is not evident, never attempt for the following adjustments.

- Disconnect P1 (T-5091, SECAM chroma D/A board). The line sweep pattern is displayed.

- Connect the oscilloscope to TP1 (T-5092, SECAM chroma filter board) and set the sweep rate to 10μs.div. Use low capacitance probe.

- Adjust L5, L6, L7, L8, and VC3 (T-5092, SECAM chroma filter board) to obtain flat response between third and fifth division of the line sweep pattern.

- Connect P1 (T-5091, SECAM chroma D/A board).

3.7.2 Chroma Level

- Set
  RASTER On

- Select SECAM in the menu.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust VR1 (T-5092, SECAM chroma filter board) to obtain ID level as follows.

  R: 532.5mVp-p
  B: 498.9mVp-p

3.7.3 Y/C Delay

- Set

  FULL FIELD On

- Select SECAM in the menu.

- Connect the oscilloscope as follows via 75Ω terminator.

  CH1: Y OUTPUT connector
  CH2: C OUTPUT connector

- Adjust VR1 (T-5091, SECAM chroma D/A board) for a Y/C delay of 0 second within ±50ns as shown in Figure 3-13.

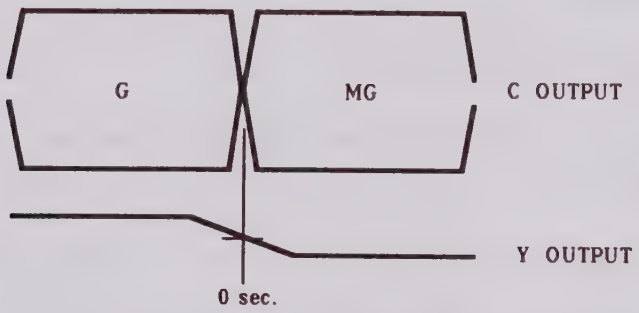


Figure 3-13

3.8 Multiburst/Sweep Mode

All adjustments and test points described in this section are located on the Multiburst/Sweep Board (T-5201) unless otherwise noted.

Note: This section describes a multiburst and sweep mode adjustment, however, the adjustment is very critical. If problem is not evident, never attempt for the following adjustments.

3.8.1 Triangle Wave

- Set
  MULTIBURST On

- Select NTSC in the menu.

- Connect the oscilloscope to TP200. Use low capacitance probe.

- See Figure 3-14.

- Adjust VR56 for a positive peak of +4V.

- Adjust VR54 for a negative peak of -4V.

- Adjust VR52 for an offset voltage of 0V.

Figure 3-14

3.8.2 Sine Wave

- Set
  MULTIBURST On

- Select NTSC in the menu.

- Connect the oscilloscope to TP202. Use low capacitance probe.

- Adjust VR201 for a positive peak (500kHz burst) of +1V.

- Adjust VR200 for a negative peak (500kHz burst) of -1V.

3.8.3 NTSC

(1) Multiburst

a. Frequency

- Set
  MULTIBURST On

- Select NTSC in the menu.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.
  Use frequency measurement function (e.g., using cursors).

- Adjust the multiburst frequency as follows by using adjustments shown in Table below.

Multiburst	Adjustment	Frequency Reading
3.58MHz	VC52	3.58MHz
500kHz	VR51	500kHz

b. Amplitude

- Set

  MULTIBURST On

- Select NTSC in the menu.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust VR202 so that the 500kHz multiburst amplitude is the same as 100% white level (0 to 100%).

(2) Sweep

a. Frequency (NARROW mode)

- Set

  SWEEP/NARROW On

- Select NTSC in the menu.

- Connect the VIDEO OUTPUT connector on the front or rear panel to CH1 INPUT of the oscilloscope via 75Ω terminator and set the vertical mode to ADD.

  Connect the signal generator to CH2 INPUT of the oscilloscope and set the frequency to 100kHz.

- Adjust VR1 (T-5202, analog board) to position the 100kHz marker at the left edge of sweep signal.

- Set the signal generator frequency to 4.2MHz.

- Adjust VR3 (T-5202, analog board) to position the 4.2MHz marker at the right edge of sweep signal.

- Adjust VR55 to obtain a best sweep linearity.

b. Frequency (WIDE mode)

- Set

  SWEEP/WIDE On

- Select NTSC in the menu.

- Connect the VIDEO OUTPUT connector on the front or rear panel to CH1 INPUT of the oscilloscope via 75Ω terminator and set the vertical mode to ADD.

  Connect the signal generator to CH2 INPUT of the oscilloscope and set the frequency to 14MHz.

- Adjust VR53 to position the 14MHz marker at the right edge of sweep signal.

• Repeat Steps "a." and "b." as required for best frequency accuracy.

c. Flatness

- Set

  SWEEP/WIDE On

- Select NTSC in the menu.

- Connect the oscilloscope to the VIDEO OUTPUT connector on the front or rear panel via 75Ω terminator.

- Adjust VC201 for best flatness.

3.8.4 PAL

Sweep Frequency (NARROW mode)

- Set

  SWEEP/NARROW On

- Select PAL in the menu.

- Connect the VIDEO OUTPUT connector on the front or rear panel to CH1 INPUT of the oscilloscope via 75Ω terminator and set the vertical mode to ADD.

  Connect the signal generator to CH2 INPUT of the oscilloscope and set the frequency to 100kHz.

- Adjust VR4 (T-5202, analog board) to position the 100kHz marker at the left edge of sweep signal.

- Set the signal generator frequency to 5.0MHz.

- Adjust VR2 (T-5202, analog board) to position the 5.0MHz marker at the right edge of sweep signal.

3.8.5 SECAM

- The performance should be the same as PAL.

3.9 RF Output

All adjustments and test points described in this section are located on the RF Board (T-5203).

3.9.1 Reference Frequency

- Connect the frequency counter to pin 6 of IC401.
- Adjust VC300 for a frequency reading of 10.000000MHz.

3.9.2 SIF-VCO

- Select the COUNTRY with SIF frequency to 6.0MHz.
- Connect the oscilloscope to TP302.
- Adjust L300 for a voltage reading of +9.16V.
- Turn power off, then turn power on again.

3.9.3 Video Modulation

- Connect the spectrum analyzer to J202 (T-5203, RF board) and set the controls as follows.

Frequency	110MHz
Attenuator	-21dB
Mode	Linear

(1) Positive/Negative Modulation

- Set

FULL FIELD	On
WHITE	100%
RF MOD, VIDEO	INT
RF Frequency	110MHz

- Select PAL-B in the menu.

- See Figure 3-15.

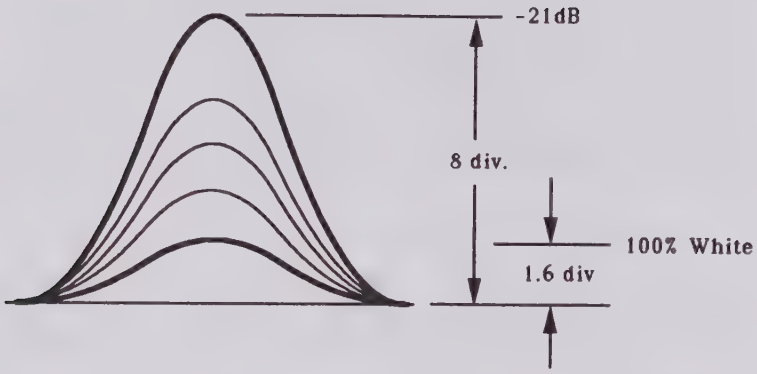


Figure 3-15

- Adjust VR100 for a highest peak level of -21dB (8-division deflection).

- Adjust VR200 for a lowest peak level of 1.6 divisions from the base line.

- Select PAL-C in the menu.

- Adjust VR201 for a lowest peak level of 1.6 divisions from the base line.

- Adjust VR200 and VR201 as required.

- Connect the RF millivoltmeter to the RF OUTPUT connector on the front panel.

- Confirm that the voltage reading is between 10mV and 15mV.

(2) Modulation Check

- Set

FULL FIELD	On
WHITE	100%
RF MOD, VIDEO	INT
RF Frequency	110MHz

- Select PAL-B in the menu.

- Confirm that the lowest peak level is 1.6 divisions from the base line.

- Set

WHITE	75%

- Confirm that the lowest peak level is 2.8 divisions from the base line.

- Set

FULL FIELD	On
WHITE	100%
RF MOD, VIDEO	INT
RF Frequency	110MHz

- Select PAL-B in the menu.

- Confirm that the highest peak level is 8.0 divisions from the base line.

- Set

WHITE	75%

- Confirm that the highest peak level is 6.8 divisions from the base line.

3.9.4 Lineality Check

- Set

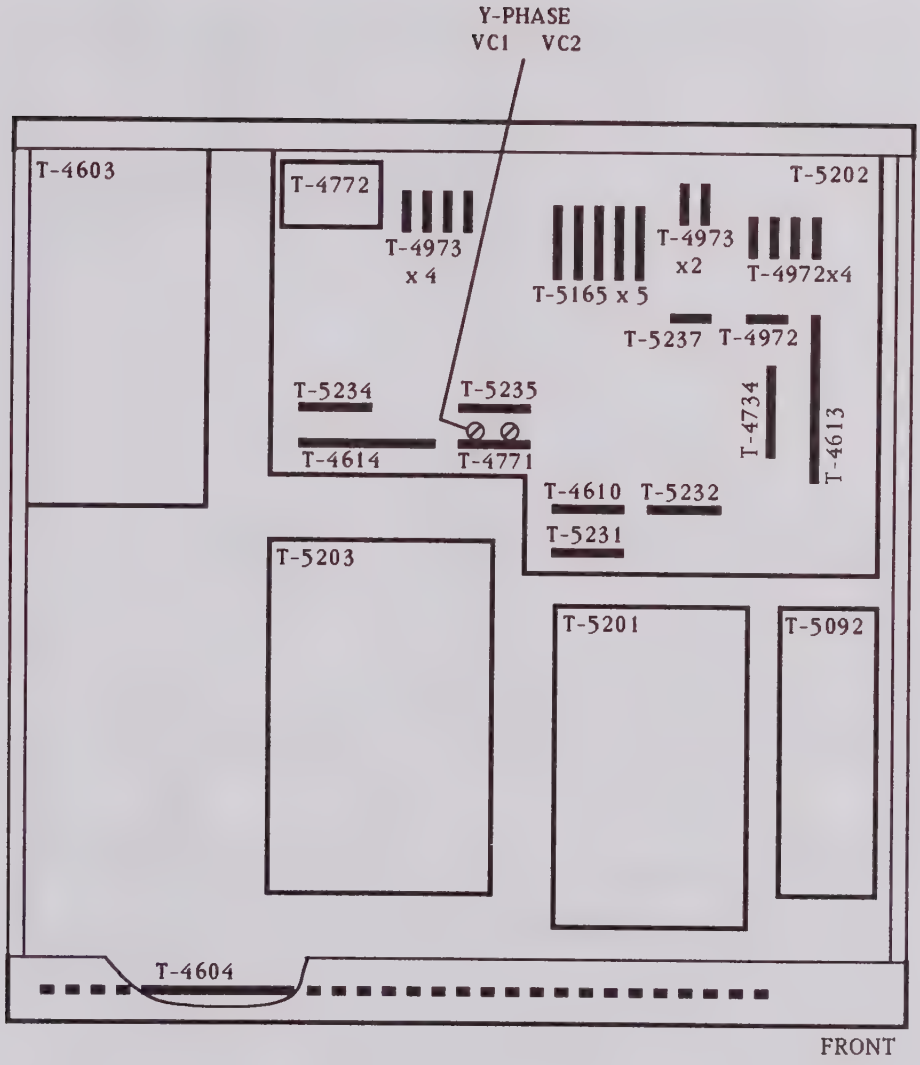
10 STEP	On
RF MOD, VIDEO	INT

- Select PAL-B in the menu.

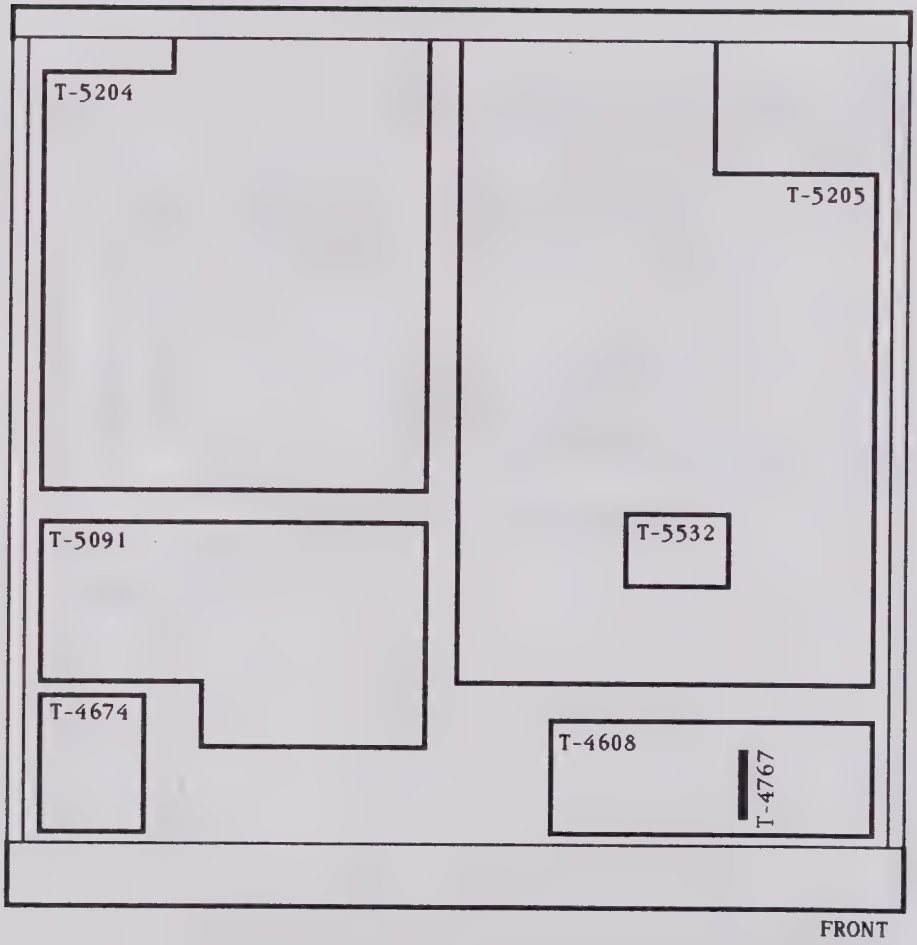
- Connect the spectrum analyzer to the RF OUTPUT connector on the front panel.

- Confirm that the 10-equal step is displayed on the spectrum analyze.

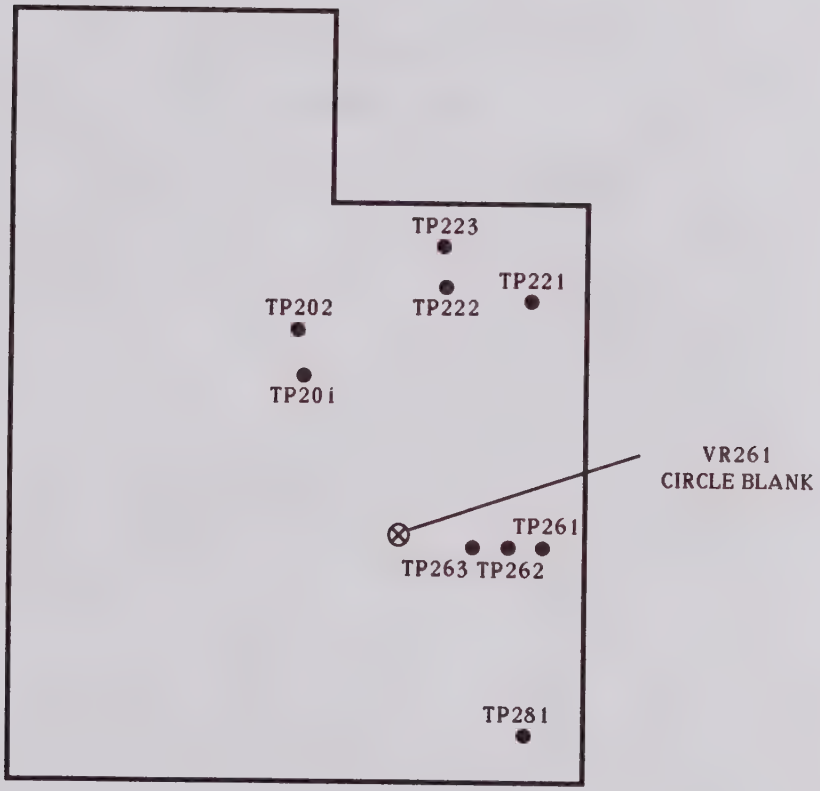
4. ADJUSTMENT LOCATIONS



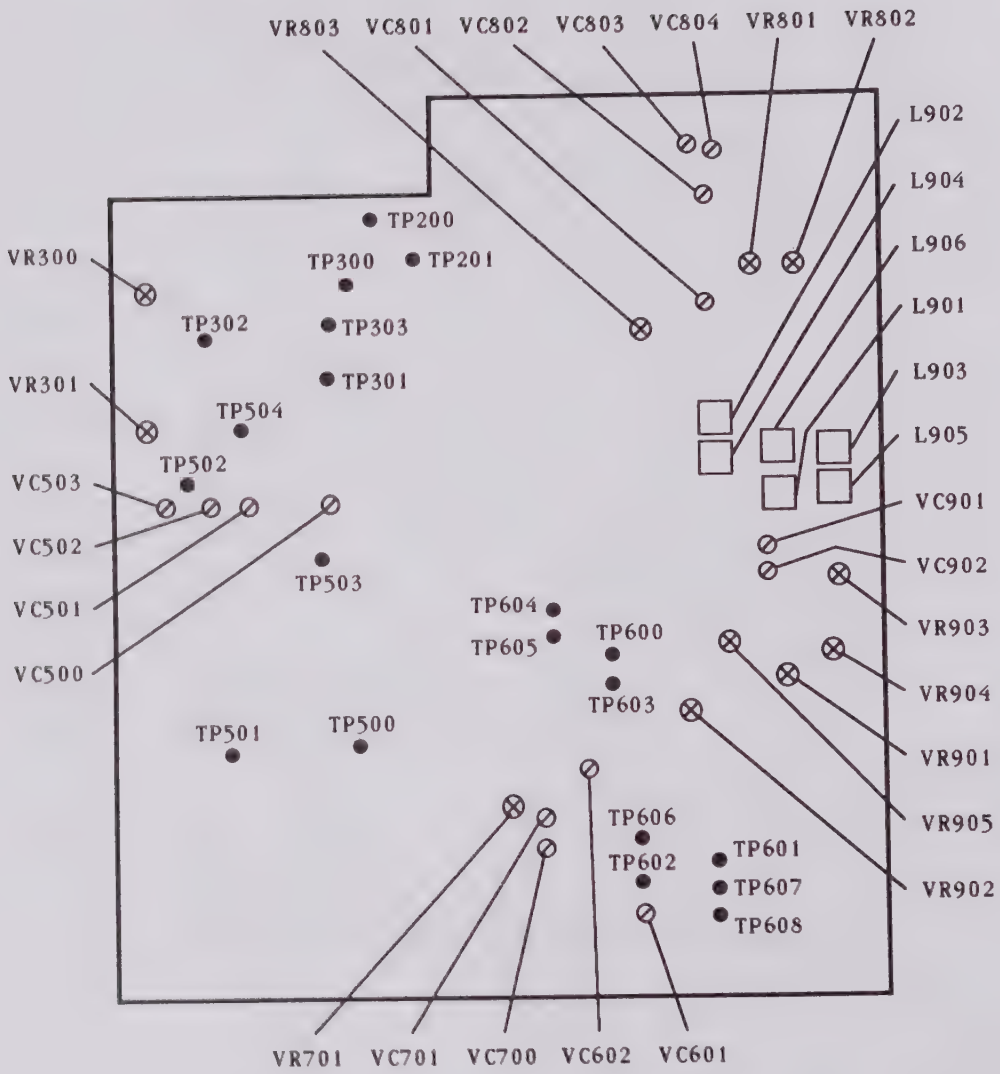
Top View



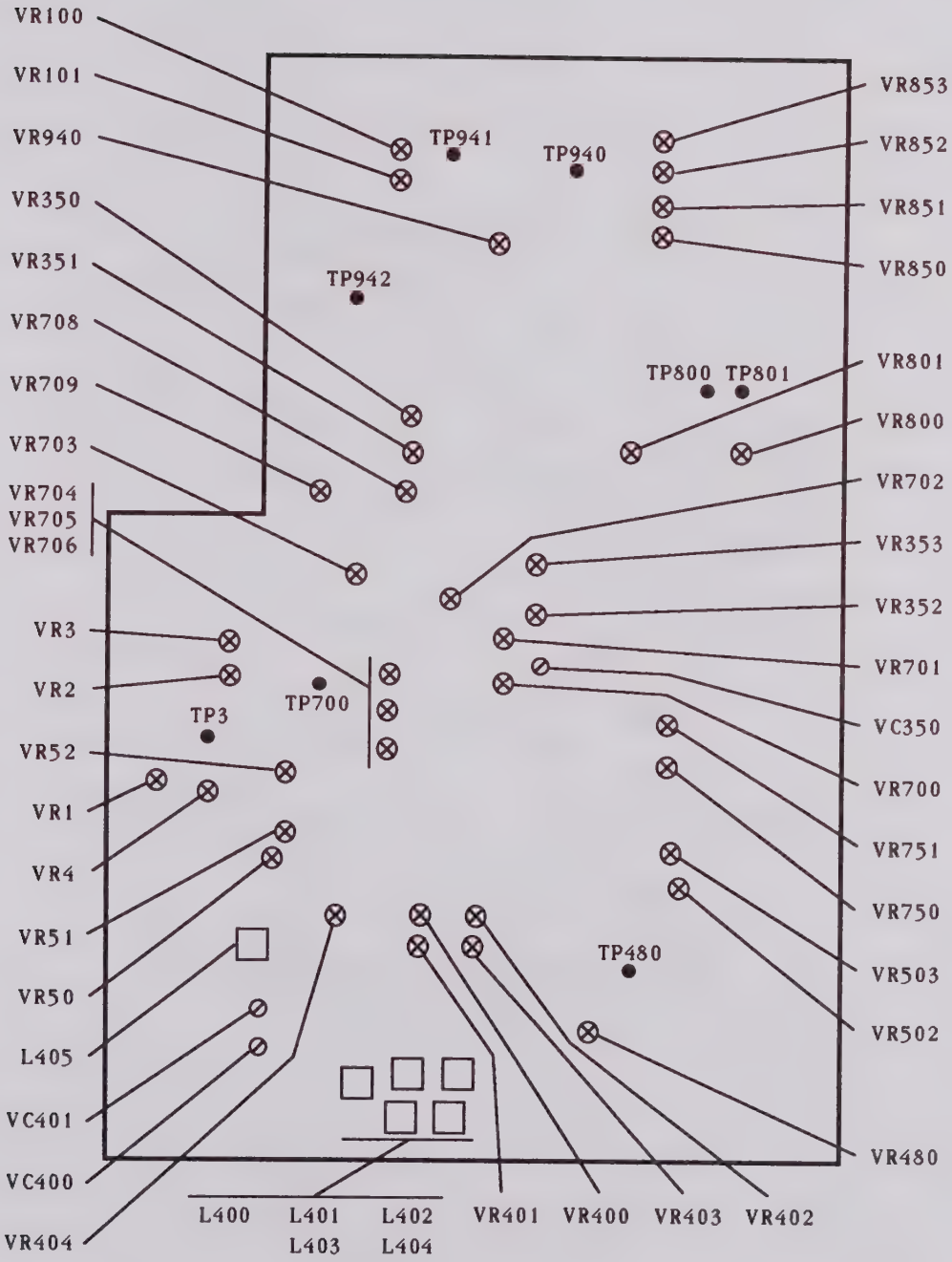
Bottom View



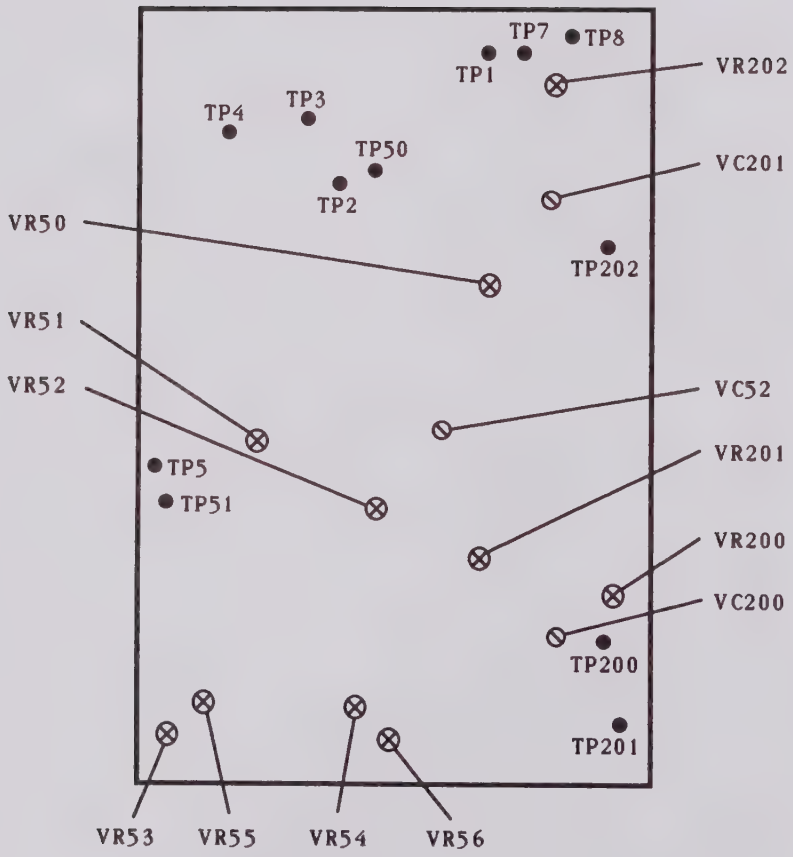
T-5205
CPU Board



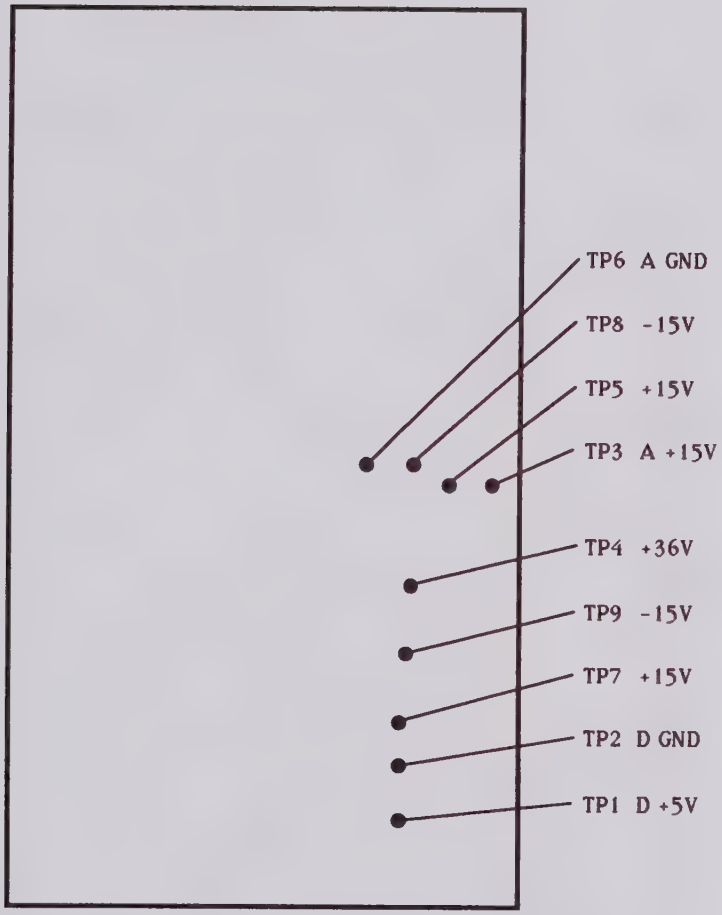
T-5204
GEN/INT Board



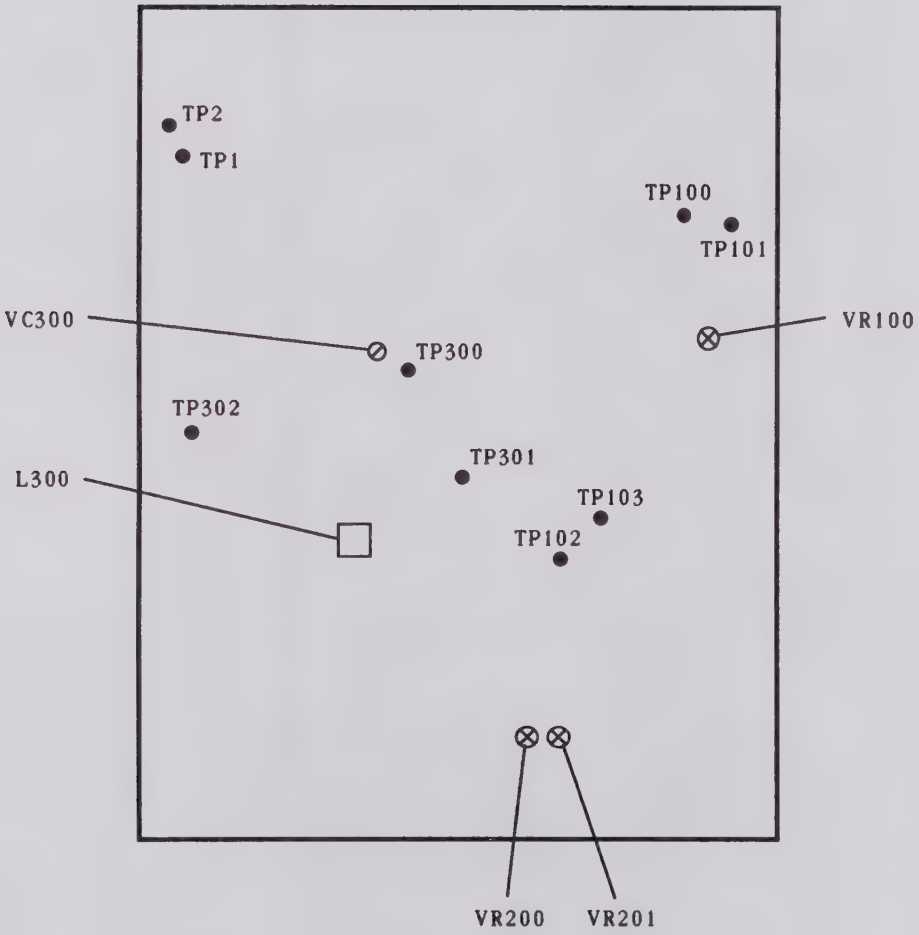
T-5202
Analog Board



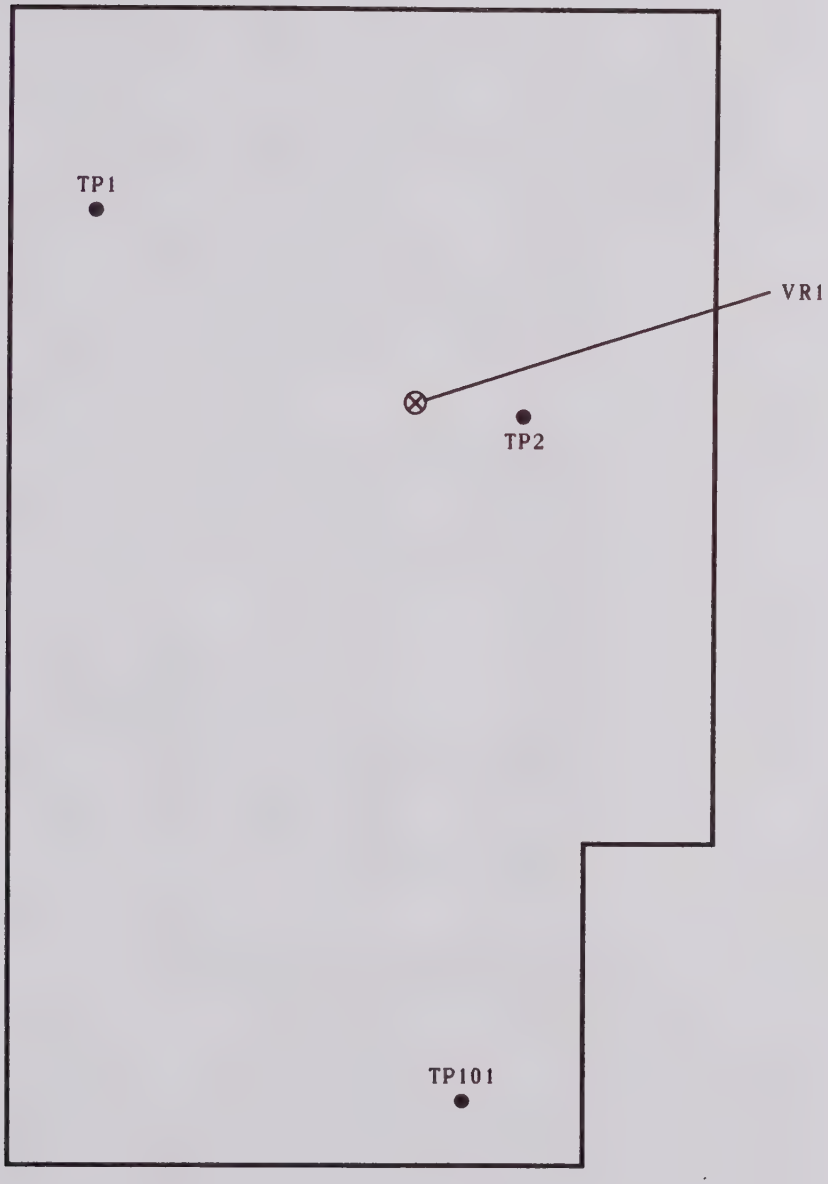
T-5201
Sweep/Milti Board



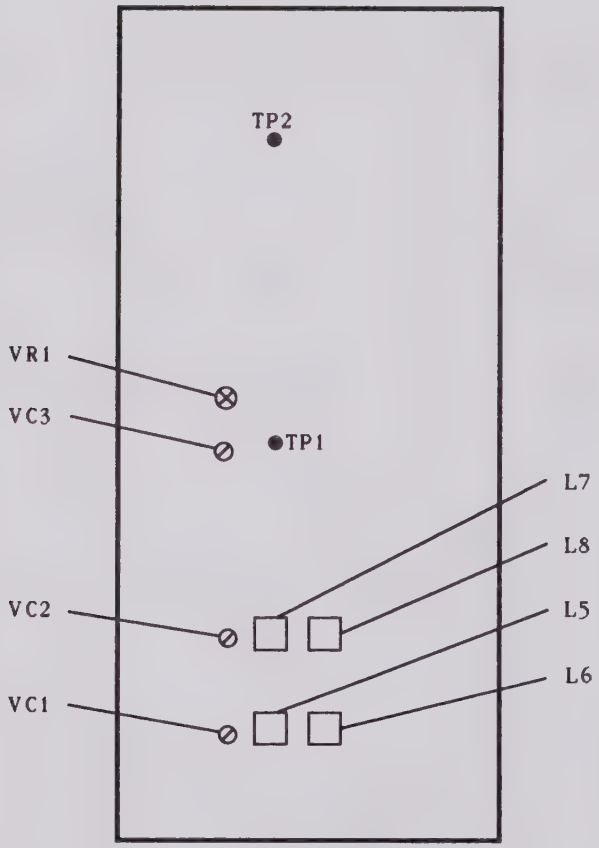
T-4603
Power Board



T-5203
RF Board

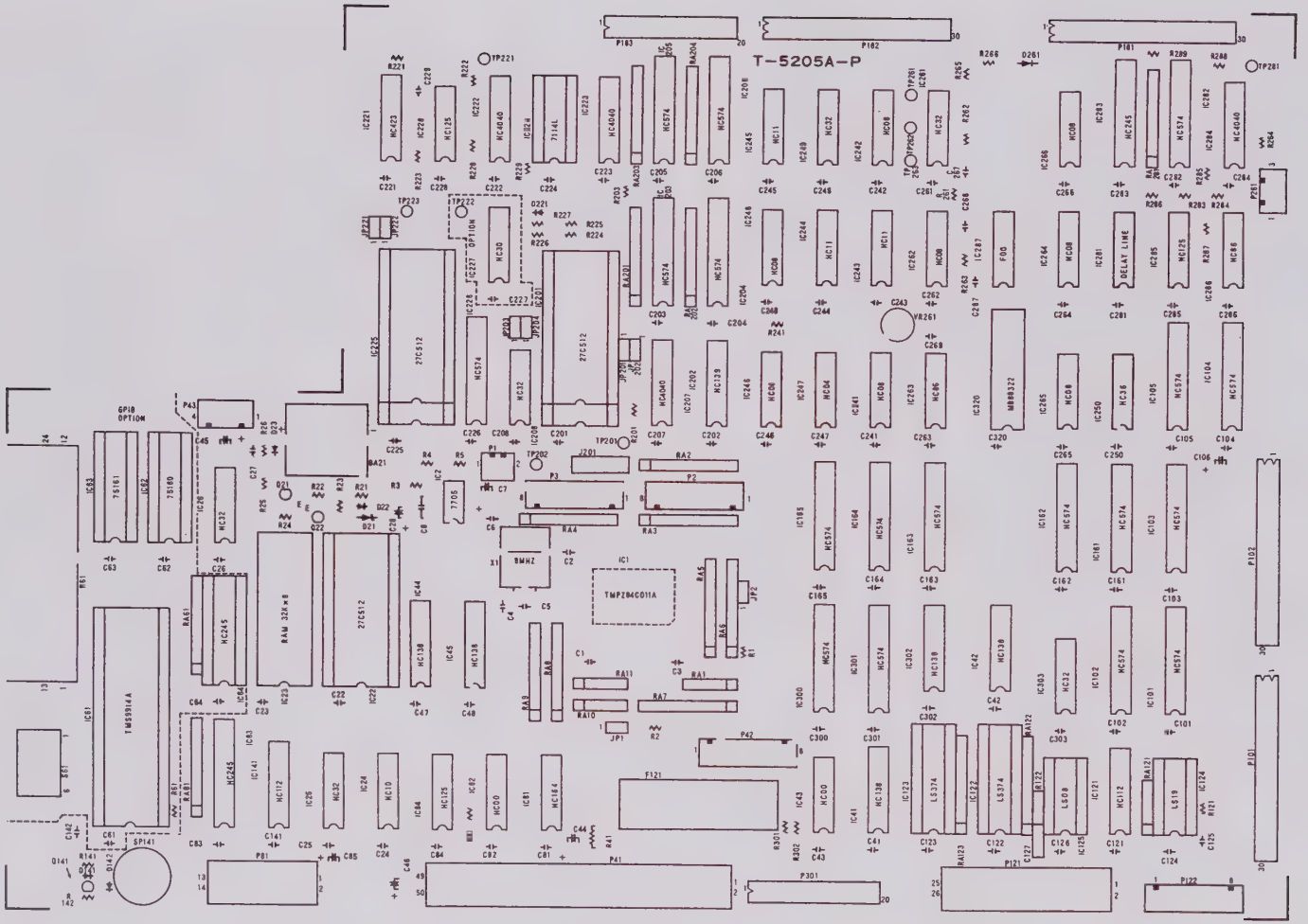


T-5091
SECAM Chroma D/A Board



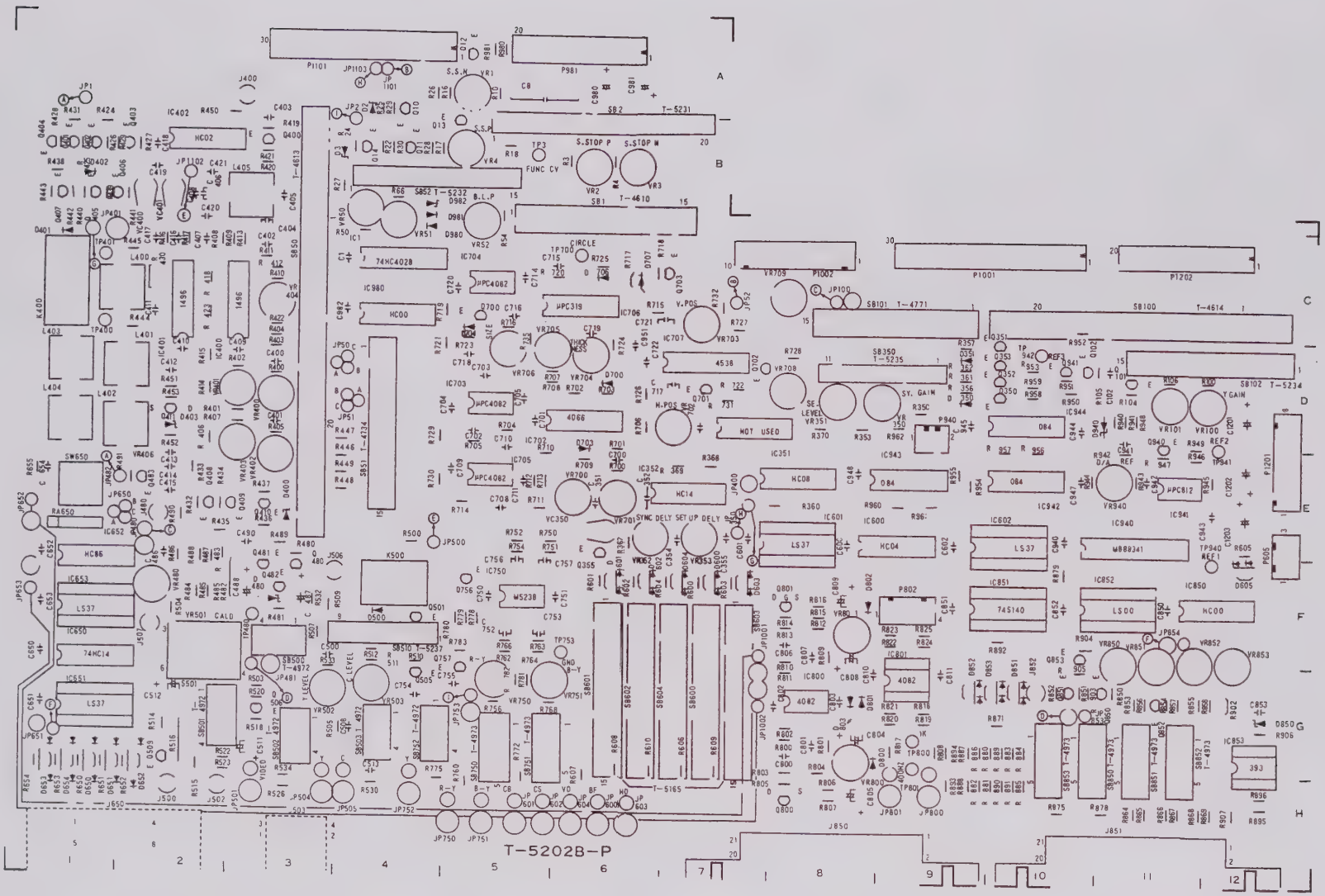
T-5092

SECAM Chroma Filter Board



T-5205 CPU Board

T-5204B-P

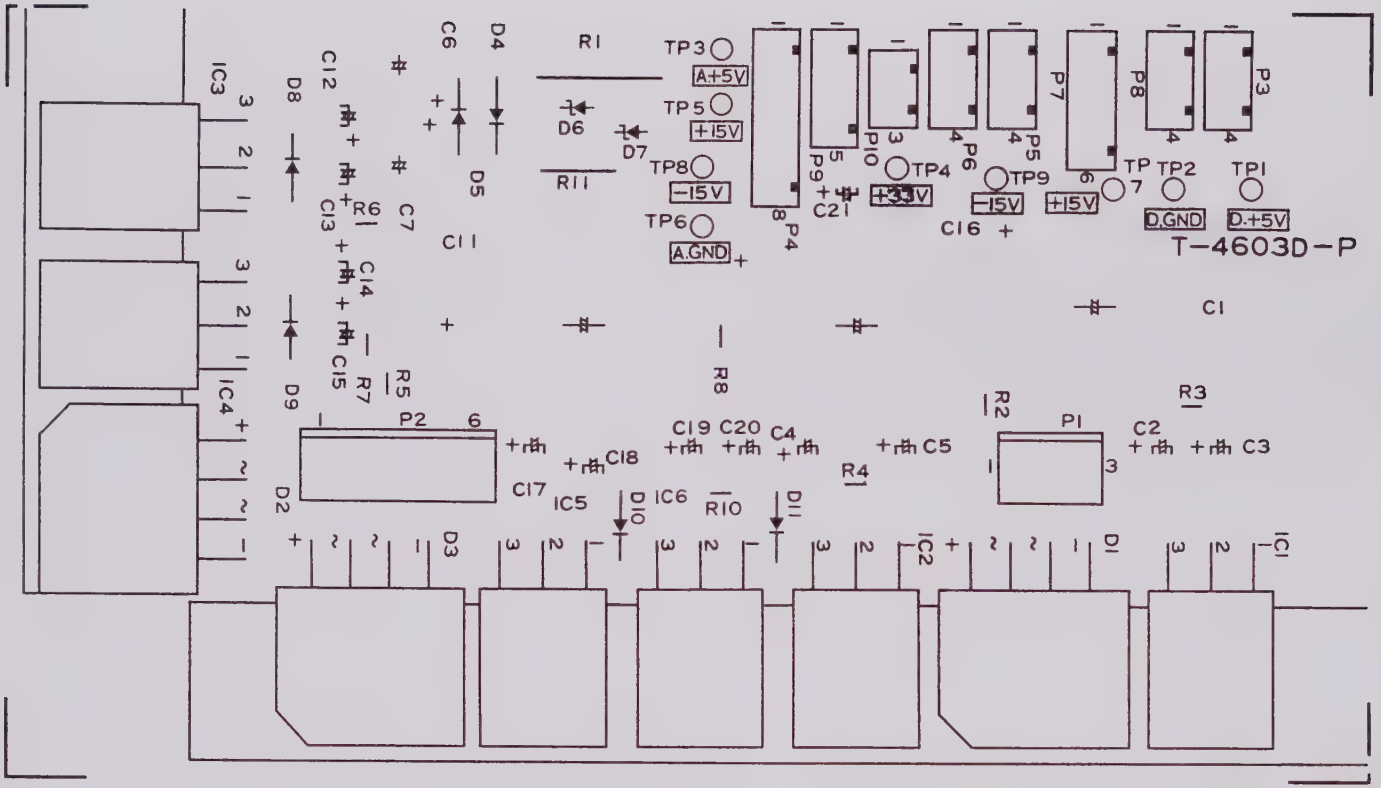


T-5202 Analog Board

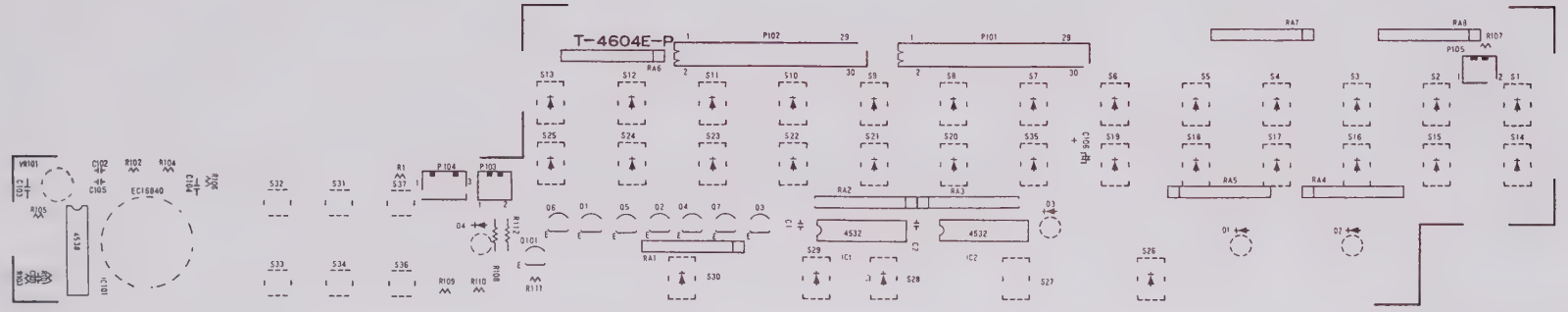
T-5201 Sweep/Multi Board

T-4973 SUB (AMP) 2 Board

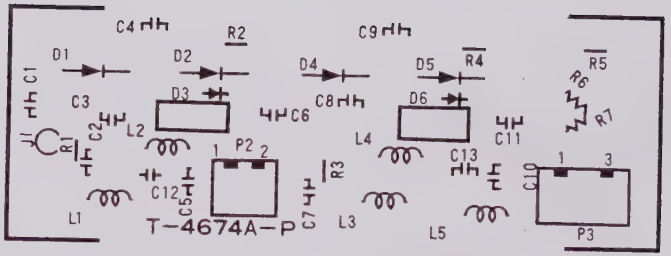
T-4972 SUB (AMP) 1 Board



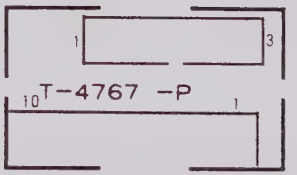
T-4603 Power Board



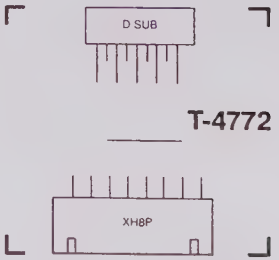
T-4604 Panel Board



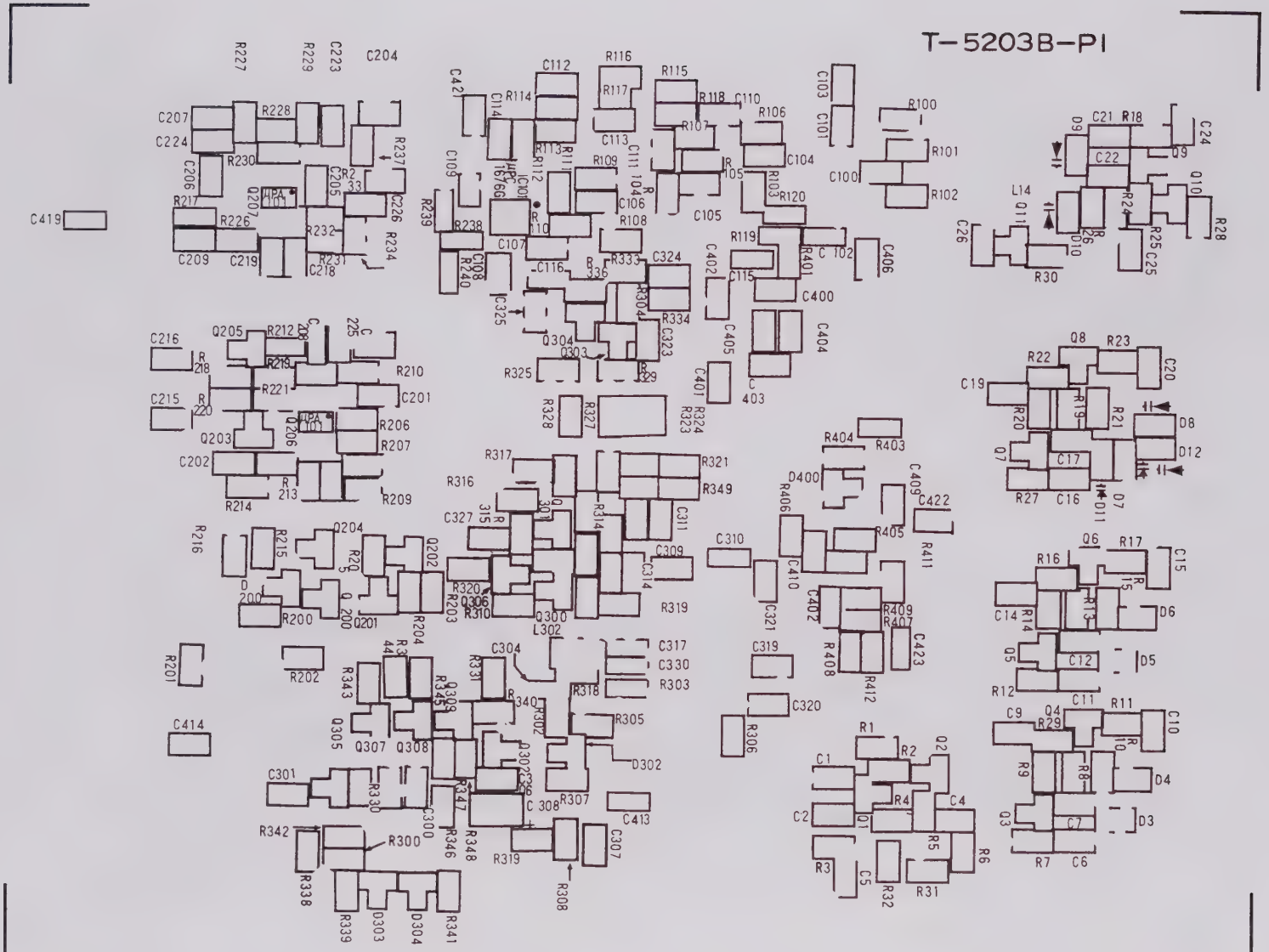
T-4674 RF Level Board



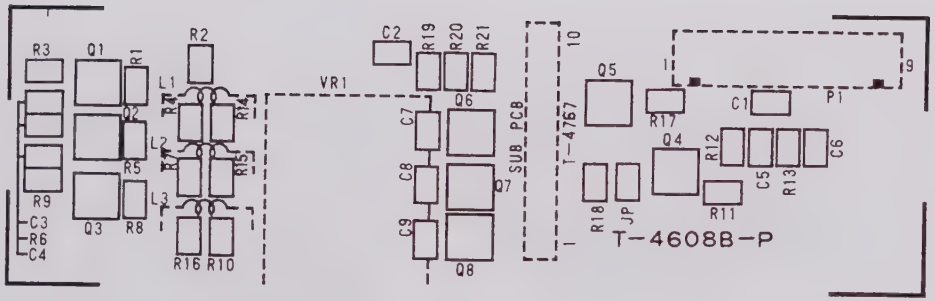
T-4767 H. Delay Board



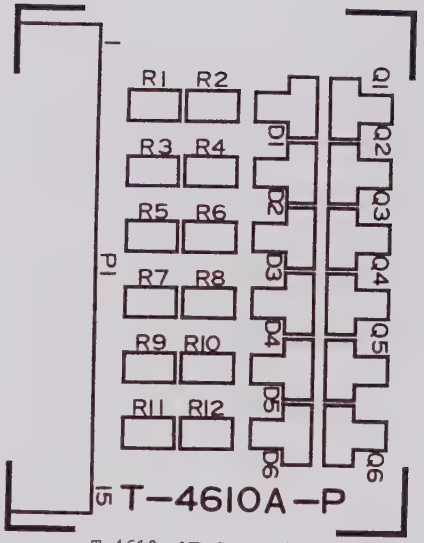
T-4772 D. SUB Board



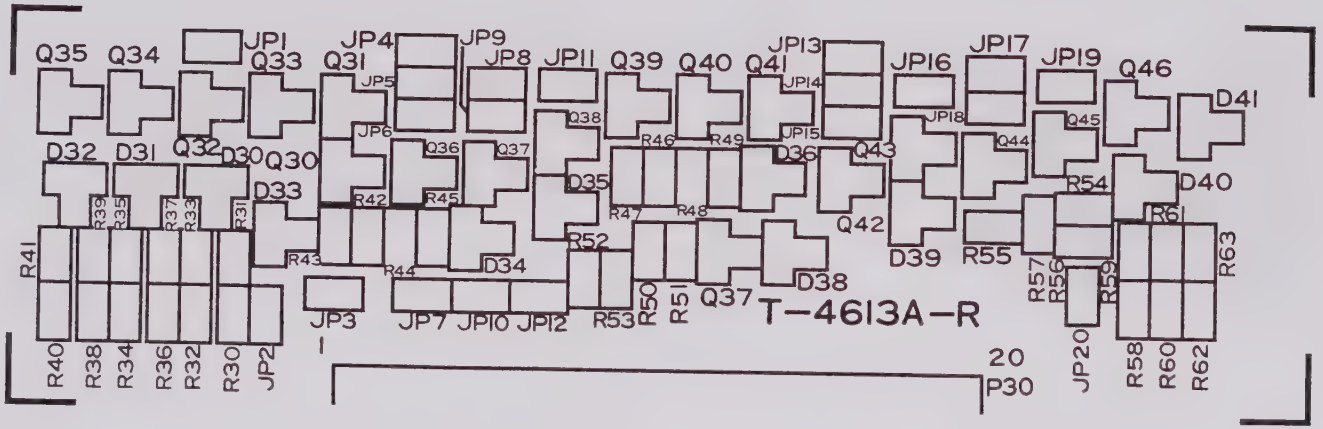
T-5203 RF Board(Soldering side)



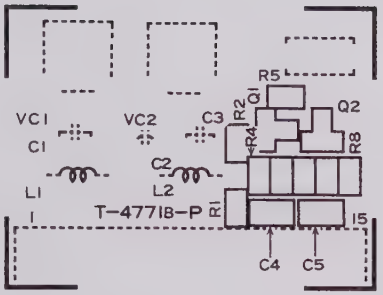
T-4608 SUB Phase Board



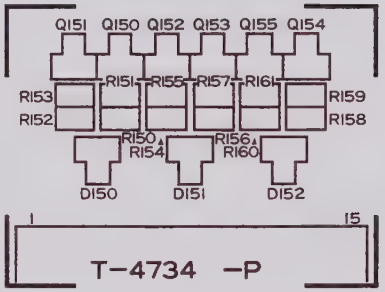
T-4610 MB Control D/A Board



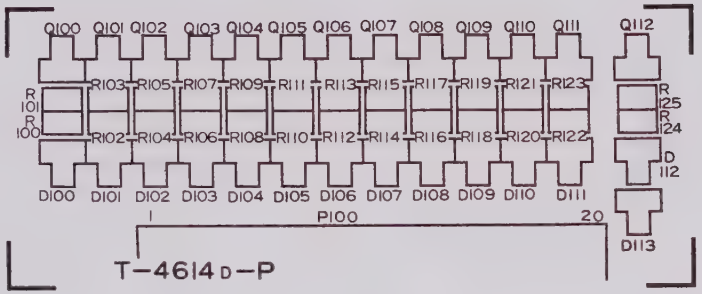
T-4613 Chroma D/A Board



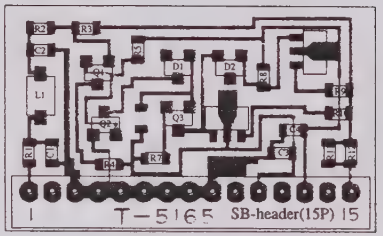
T-4771 Y. Filter Board



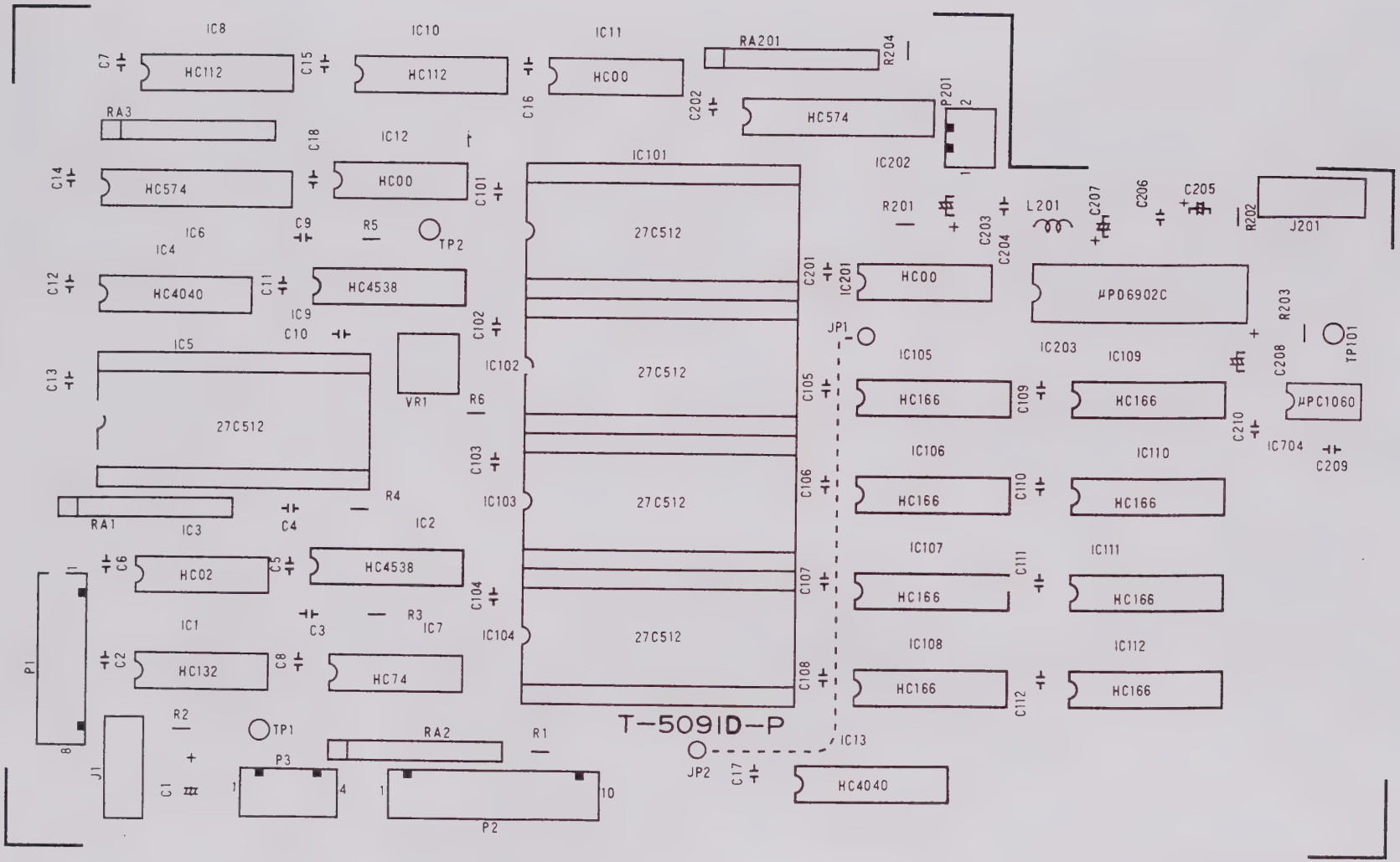
T-4734 Chroma D/A Board



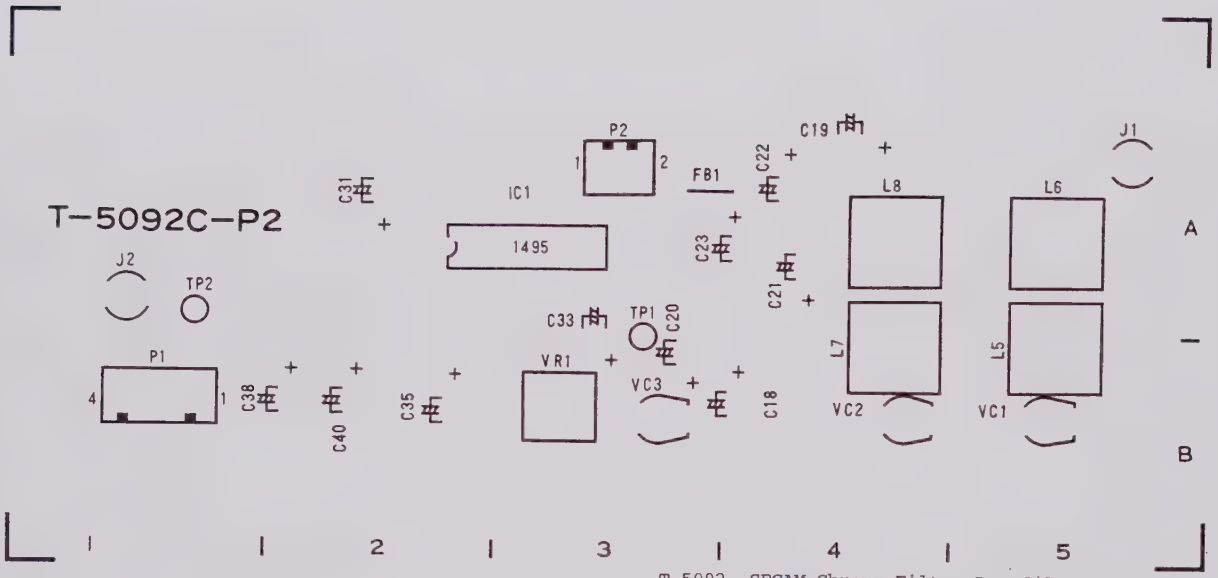
T-4614 Y D/A Board



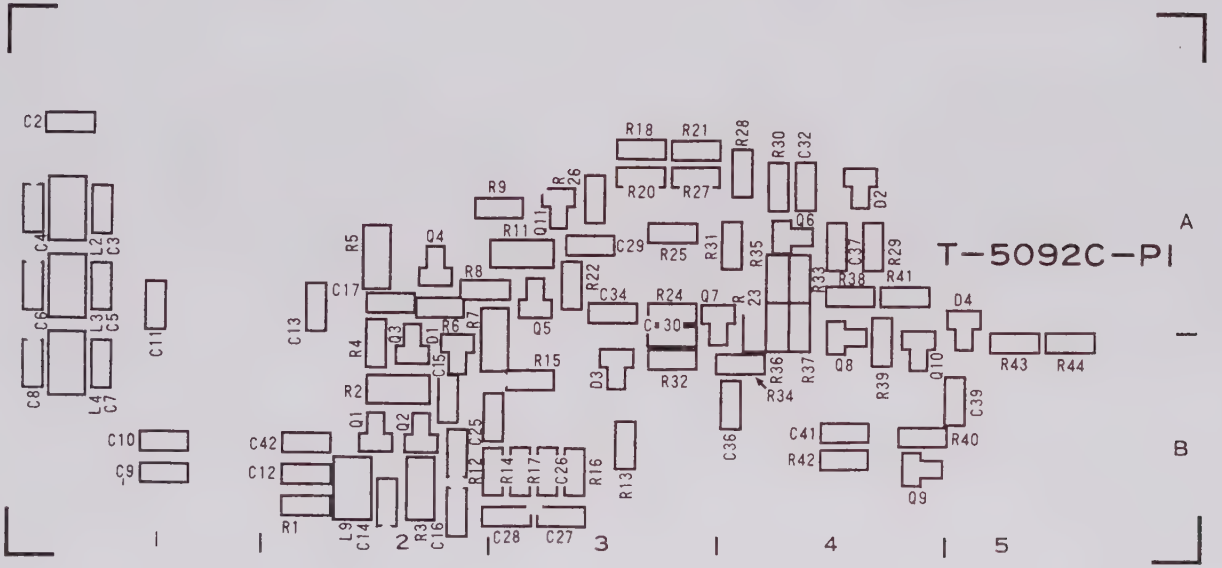
T-5165 Pulse Amp Board



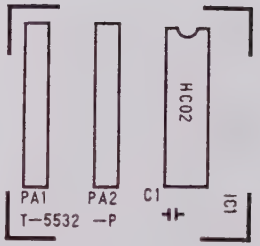
T-5091 SECAM Chroma D/A Board



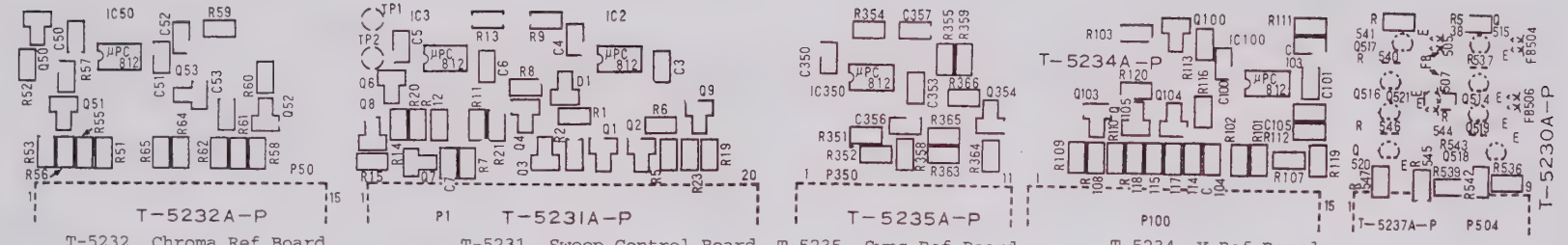
T-5092 SECAM Chroma Filter Board(Component side)



T-5092 SECAM Chroma Filter Board(Soldering side)



T-5532 CPU-SUB Board



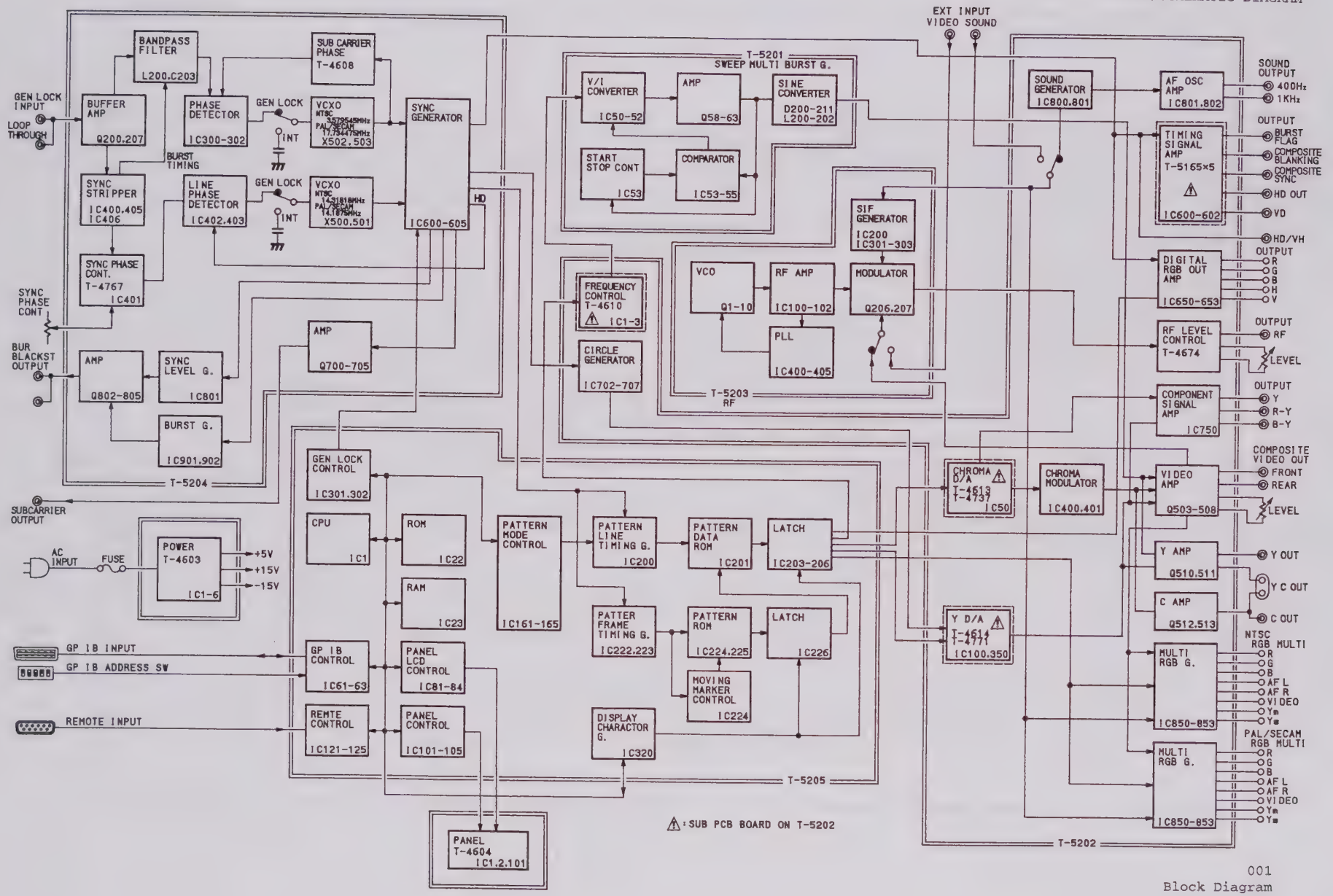
T-5232 Chroma Ref Board

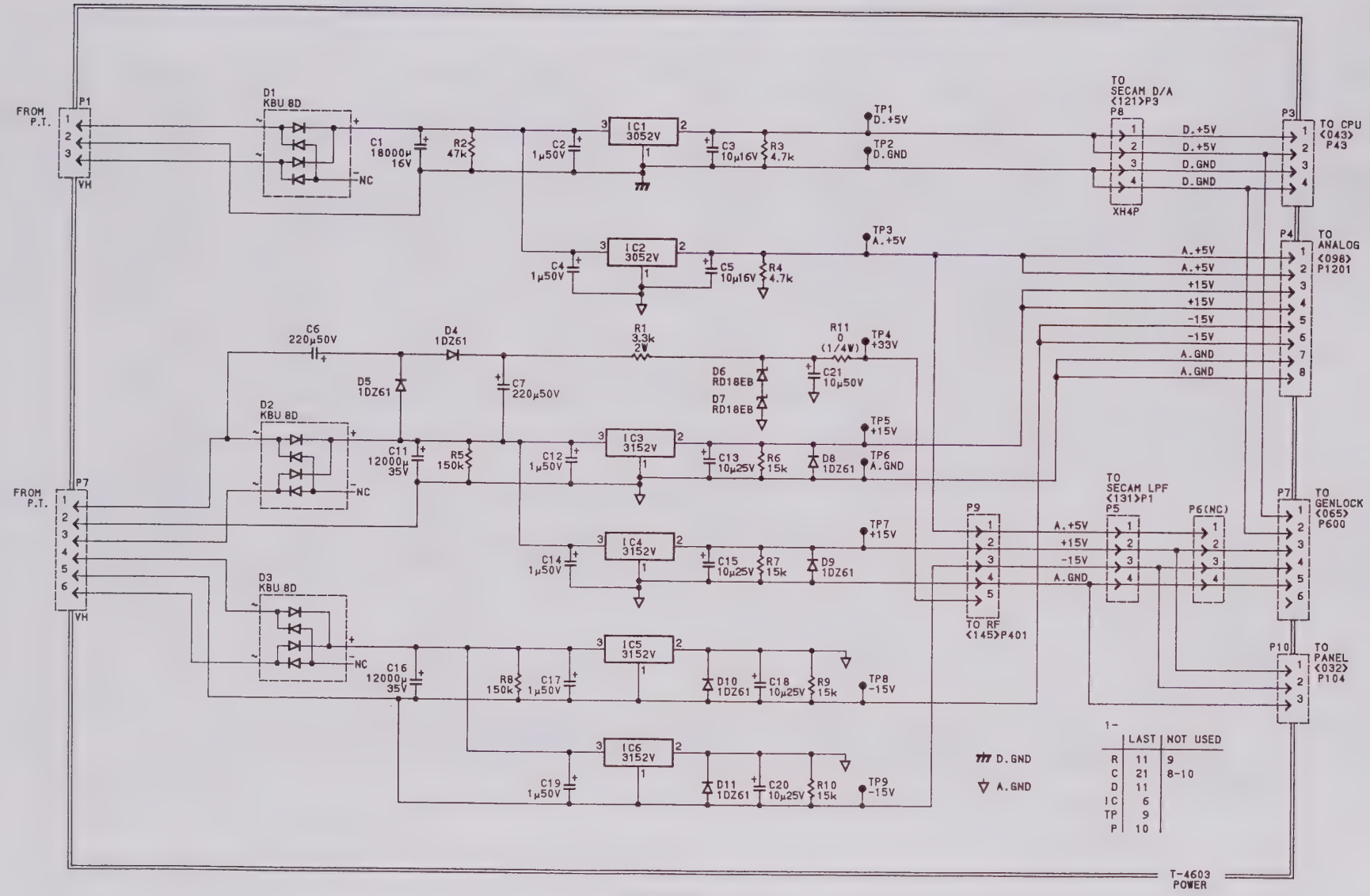
T-5231 Sweep Control Board

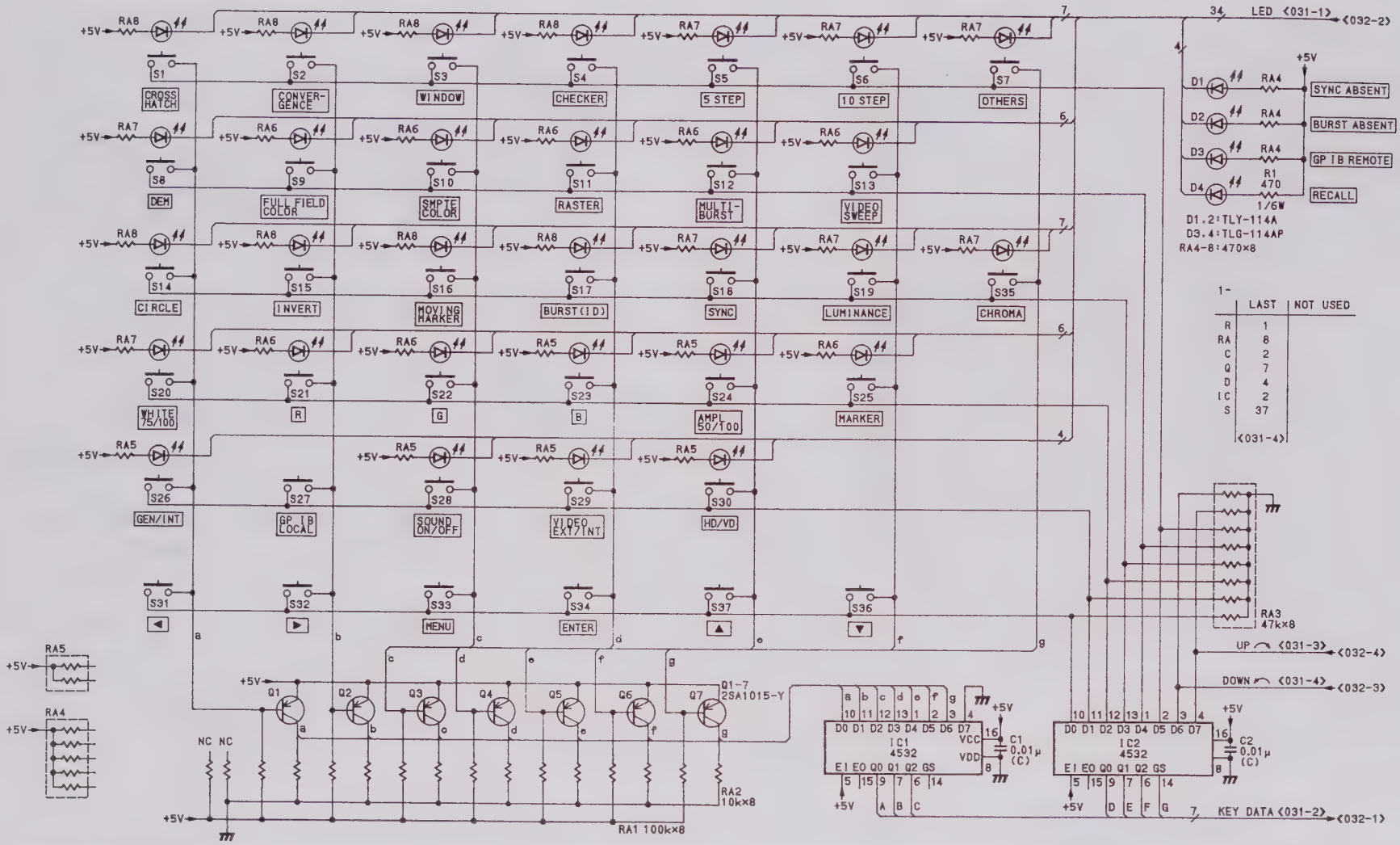
T-5235 Sync Ref Board

T-5234 Y Ref Board

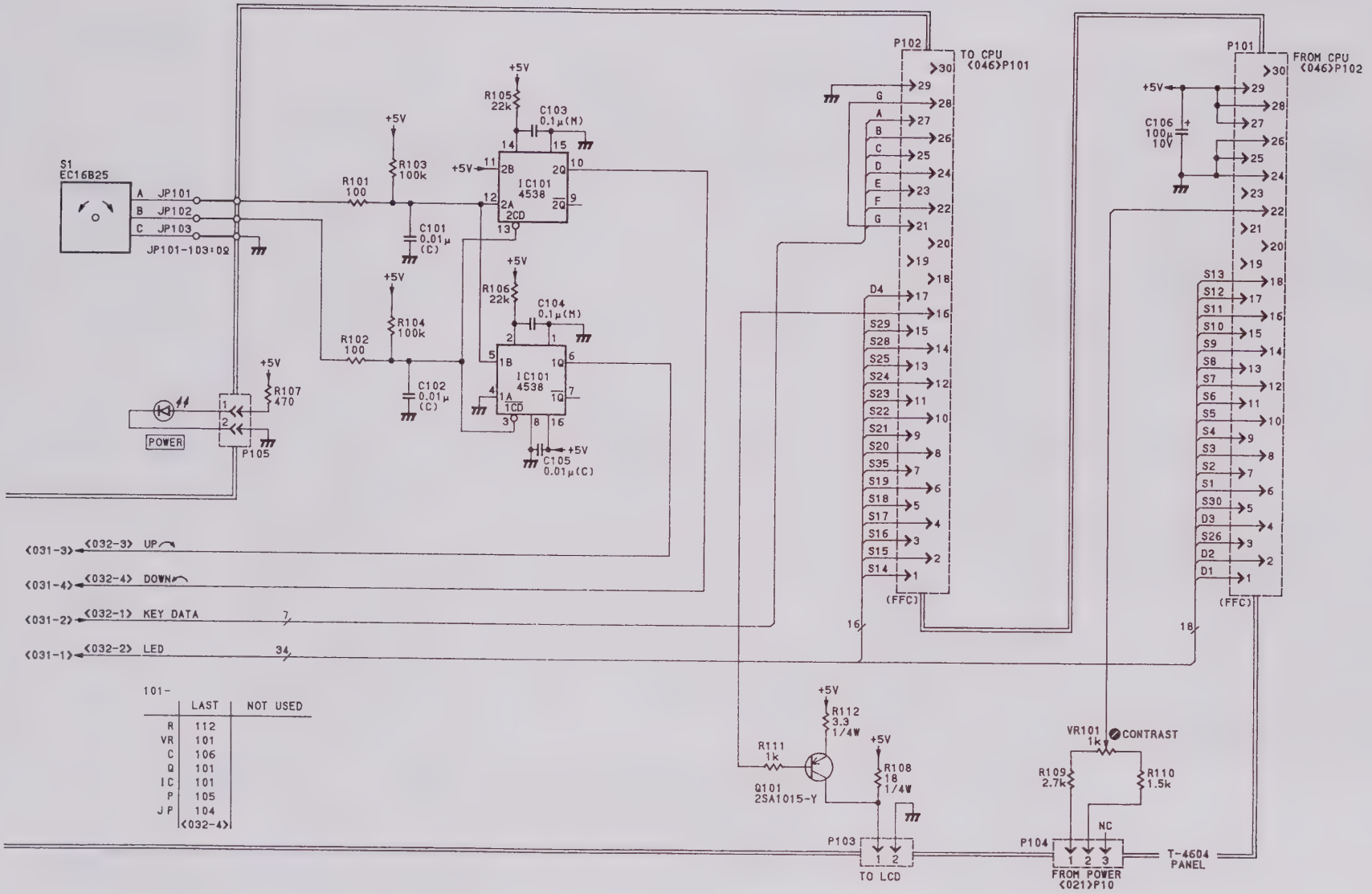
T-5237 Y/C Board


EXT INPUT
VIDEO SOUND
T-5201
SWEEP MULTI BURST G.
V/I CONVERTER IC50-52
AMP Q58-63
SINE CONVERTER D200-211 L200-202
START STOP CONT IC53
COMPARATOR IC53-55
SOUND GENERATOR IC800.801
AF OSC AMP IC801.802
SOUND OUTPUT
400Hz
1KHz
BANDPASS FILTER L200.C203
SUB CARRIER PHASE T-4608
GEN LOCK INPUT
LOOP THROUGH
BUFFER AMP Q200.207
PHASE DETECTOR IC300-302
GEN LOCK
INT
VCXO NTSC 3.579545MHz PAL/SECAM 17.734475MHz X502.503
SYNC GENERATOR IC600-605
HD
BURST TIMING
SYNC STRIPPER IC400.405 IC406
LINE PHASE DETECTOR IC402.403
VCXO NTSC 14.31818MHz PAL/SECAM 14.187575MHz X500.501
SYNC PHASE CONT. T-4767 IC401
SYNC PHASE CONT
SIF GENERATOR IC200 IC301-303
VCO Q1-10
RF AMP IC100-102
MODULATOR Q206.207
PLL IC400-405
FREQUENCY CONTROL T-4610 IC1-3
CIRCLE GENERATOR IC702-707
T-5203 RF
TIMING SIGNAL AMP T-5165×5 IC600-602
OUTPUT
BURST FLAG
COMPOSITE BLANKING
COMPOSITE SYNC
HD OUT
VD
HD/VH
DIGITAL RGB OUT AMP IC650-653
OUTPUT R G B H V
RF LEVEL CONTROL T-4674
OUTPUT RF
LEVEL
COMPONENT SIGNAL AMP IC750
OUTPUT Y R-Y B-Y
BUR BLACKST OUTPUT
AMP Q802-805
SYNC LEVEL G. IC801
BURST G. IC901.902
AMP Q700-705
T-5204
SUBCARRIER OUTPUT
GEN LOCK CONTROL IC301.302
CHROMA D/A T-4613 T-4737 IC50
CHROMA MODULATOR IC400.401
VIDEO AMP Q503-508
COMPOSITE VIDEO OUT
FRONT
REAR
LEVEL
CPU IC1
ROM IC22
RAM IC23
PATTERN MODE CONTROL IC161-165
PATTERN LINE TIMING G. IC200
PATTERN DATA ROM IC201
LATCH IC203-206
Y AMP Q510.511
Y OUT
Y C OUT
C AMP Q512.513
C OUT
AC INPUT
FUSE
POWER T-4603 IC1-6
+5V
+15V
-15V
PATTER FRAME TIMING G. IC222.223
PATTERN ROM IC224.225
LATCH IC226
MOVING MARKER CONTROL IC224
Y D/A T-4614 T-4711 IC100.350
GP IB INPUT
GP IB ADDRESS SW
GP IB CONTROL IC61-63
PANEL LCD CONTROL IC81-84
NTSC RGB MULTI
MULTI RGB G. IC850-853
R G B AF L AF R VIDEO Ya Ya
REMOTE INPUT
REMTE CONTROL IC121-125
PANEL CONTROL IC101-105
DISPLAY CHARACTOR G. IC320
T-5205
PAL/SECAM RGB MULTI
PANEL T-4604 IC1.2.101
⚠ : SUB PCB BOARD ON T-5202
T-5202


FROM P.T.
P1
VH
D1 KBU 8D
C1 18000μ 16V
R2 47k
C2 1μ50V
IC1 3052V
C3 10μ16V
R3 4.7k
TP1 D.+5V
TP2 D.GND
NC
TO SECAM D/A <121>P3
P8
XH4P
D.+5V
D.+5V
D.GND
D.GND
P3
TO CPU <043> P43
IC2 3052V
C4 1μ50V
C5 10μ16V
R4 4.7k
TP3 A.+5V
P4
TO ANALOG <098> P1201
A.+5V
A.+5V
+15V
+15V
-15V
-15V
A.GND
A.GND
C6 220μ50V
D4 1DZ61
R1 3.3k 2W
R11 0 (1/4W)
TP4 +33V
D5 1DZ61
C7 220μ50V
D6 RD18EB
D7 RD18EB
C21 10μ50V
D2 KBU 8D
C11 12000μ 35V
R5 150k
IC3 3152V
C12 1μ50V
C13 10μ25V
R6 15k
D8 1DZ61
TP5 +15V
TP6 A.GND
FROM P.T.
P7
VH
NC
IC4 3152V
C14 1μ50V
C15 10μ25V
R7 15k
D9 1DZ61
TP7 +15V
P9
TO SECAM LPF <131>P1
P5
P6(NC)
A.+5V
+15V
-15V
A.GND
TO RF <145>P401
P7
TO GENLOCK <065> P600
D3 KBU 8D
C16 12000μ 35V
R8 150k
C17 1μ50V
IC5 3152V
D10 1DZ61
C18 10μ25V
R9 15k
TP8 -15V
P10
TO PANEL <032> P104
IC6 3152V
C19 1μ50V
D11 1DZ61
C20 10μ25V
R10 15k
TP9 -15V
D.GND
A.GND
1-
LAST NOT USED
R 11 9
C 21 8-10
D 11
IC 6
TP 9
P 10
T-4603 POWER

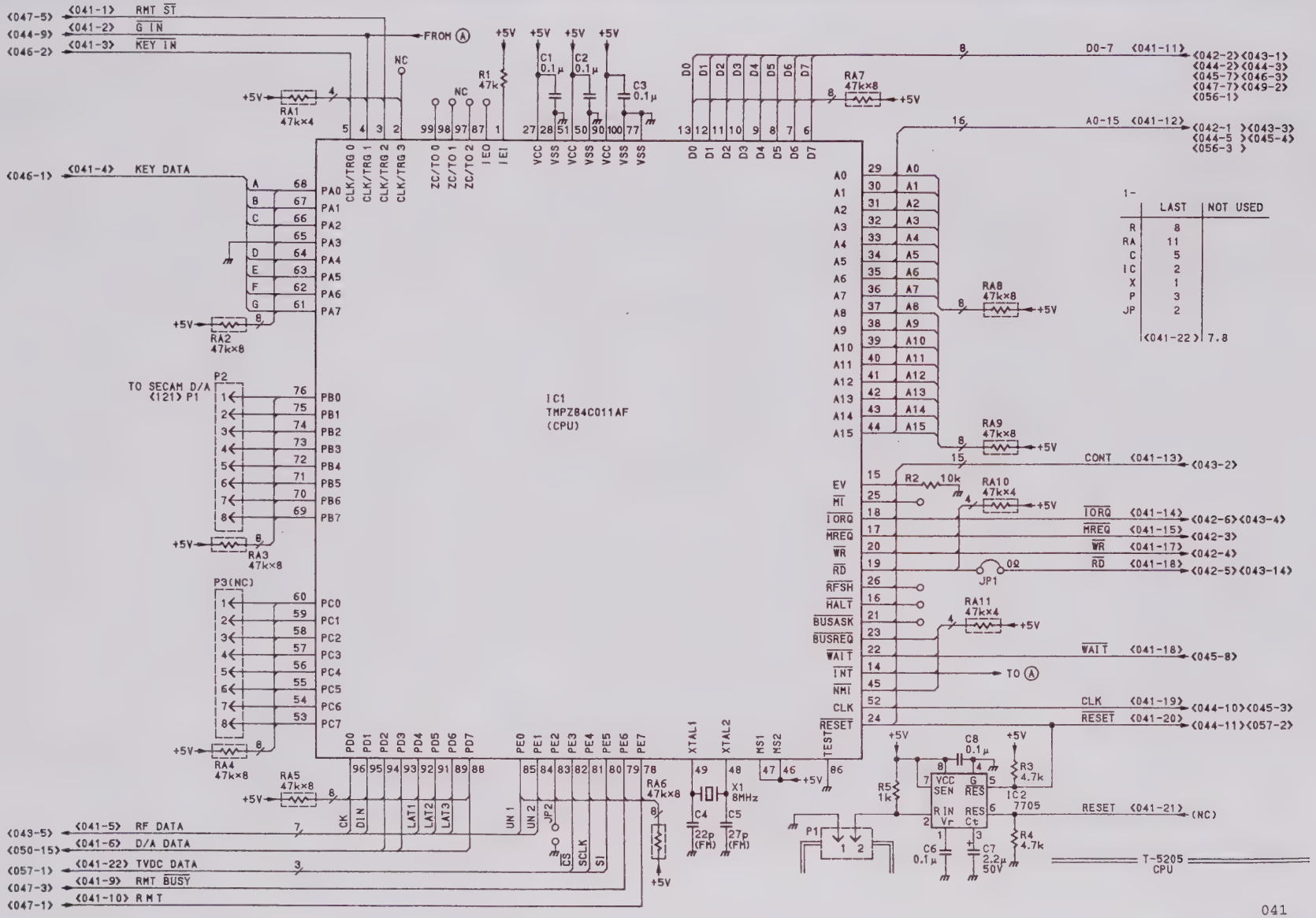

CROSS HATCH
CONVER-GENCE
WINDOW
CHECKER
5 STEP
10 STEP
OTHERS
DEM
FULL FIELD COLOR
SMPTE COLOR
RASTER
MULTI-BURST
VIDEO SWEEP
CIRCLE
INVERT
MOVING MARKER
BURST(ID)
SYNC
LUMINANCE
CHROMA
WHITE 75/100
R
G
B
AMPL 50/100
MARKER
GEN/INT
GP I B LOCAL
SOUND ON/OFF
VIDEO EXT/INT
HD/VD
MENU
ENTER
LED <031-1>
<032-2>
SYNC ABSENT
BURST ABSENT
GP I B REMOTE
RECALL
D1,2:TLY-114A
D3,4:TLG-114AP
RA4-8:470×8
LAST NOT USED
R 1
RA 8
C 2
Q 7
D 4
IC 2
S 37
<031-4>
RA3 47k×8
UP <031-3> <032-4>
DOWN <031-4> <032-3>
KEY DATA <031-2> <032-1>
Q1-7 2SA1015-Y
IC1 4532
IC2 4532
C1 0.01μ (C)
C2 0.01μ (C)
RA1 100k×8
RA2 10k×8
NC NC

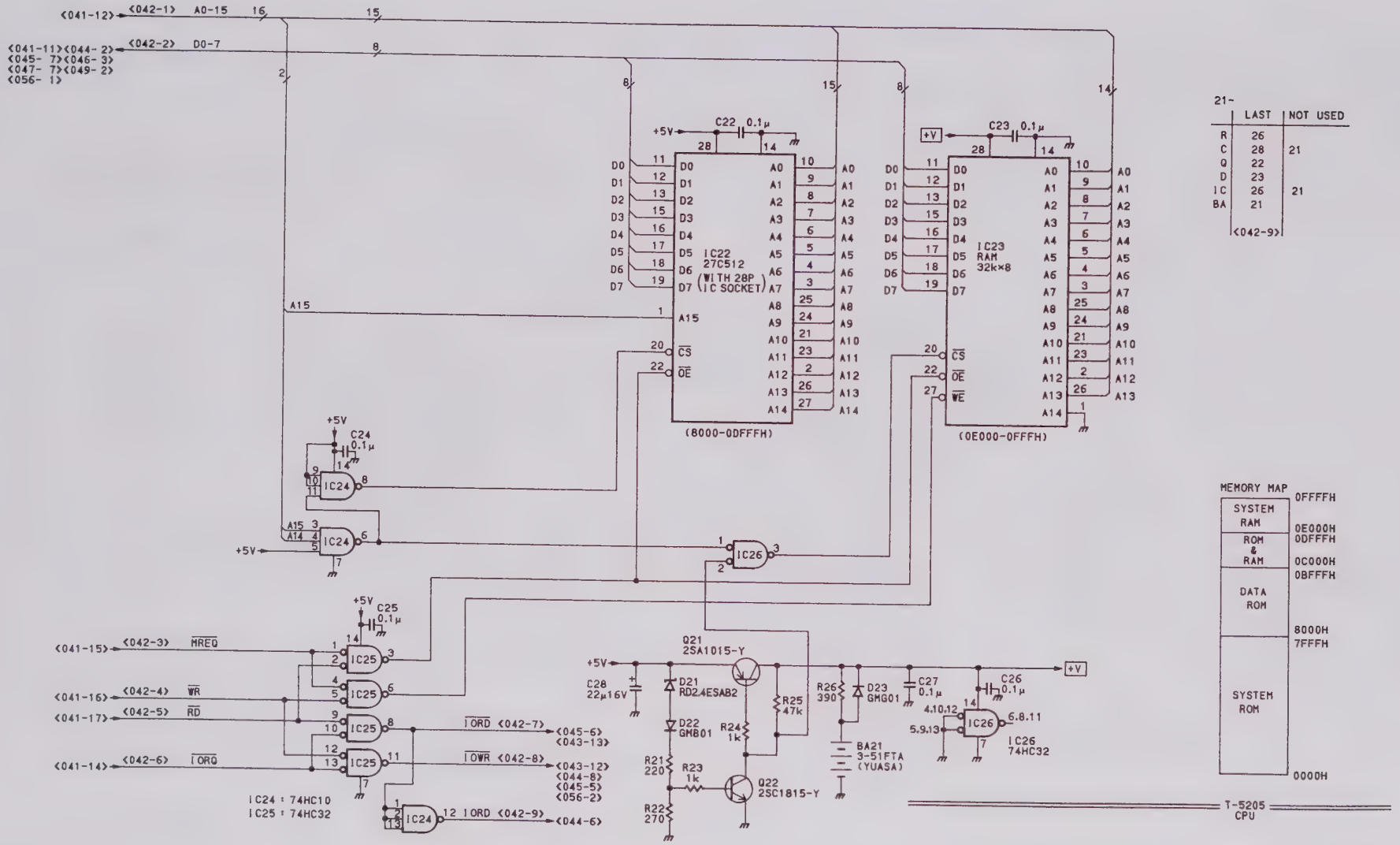
T-4604 PANEL



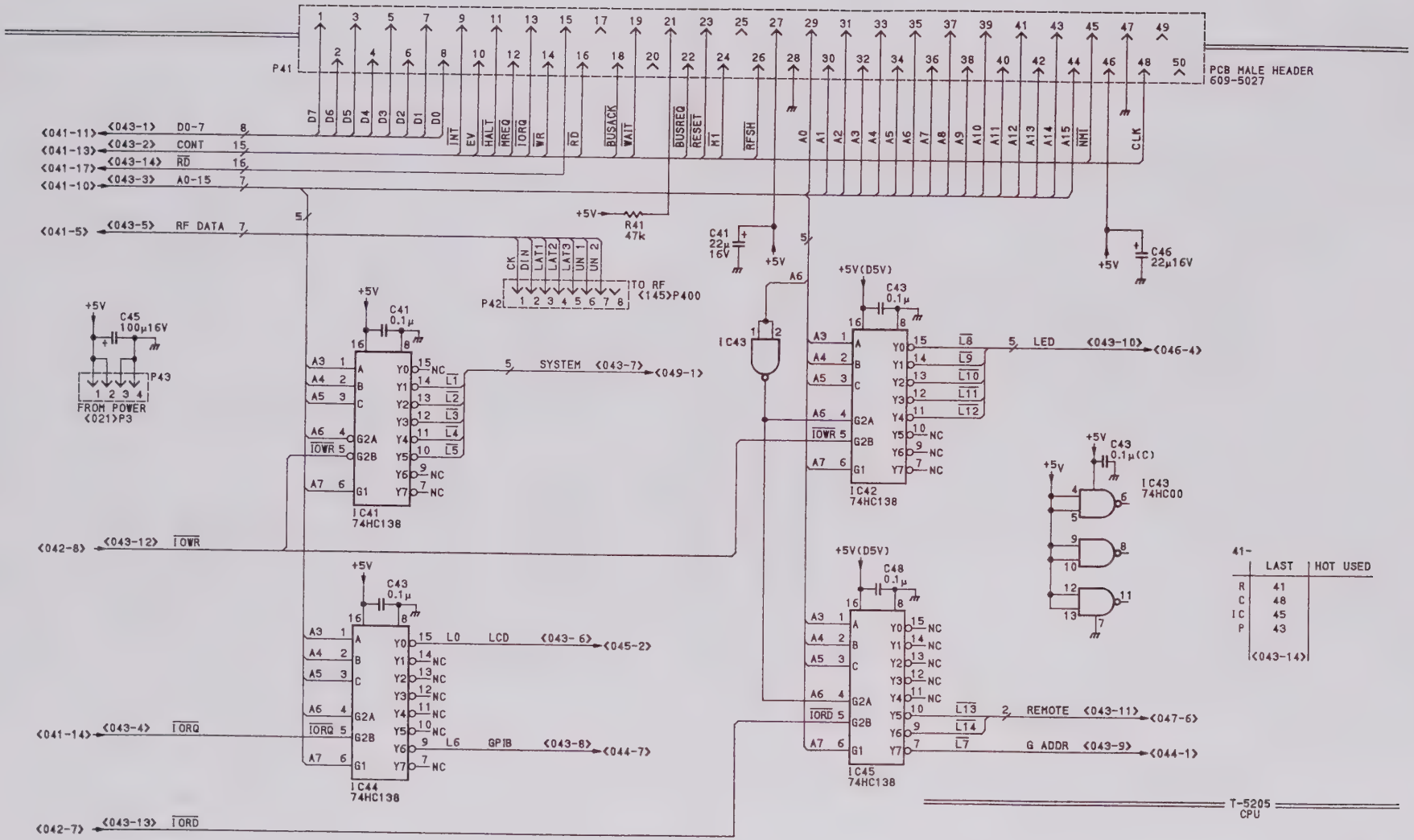
101-

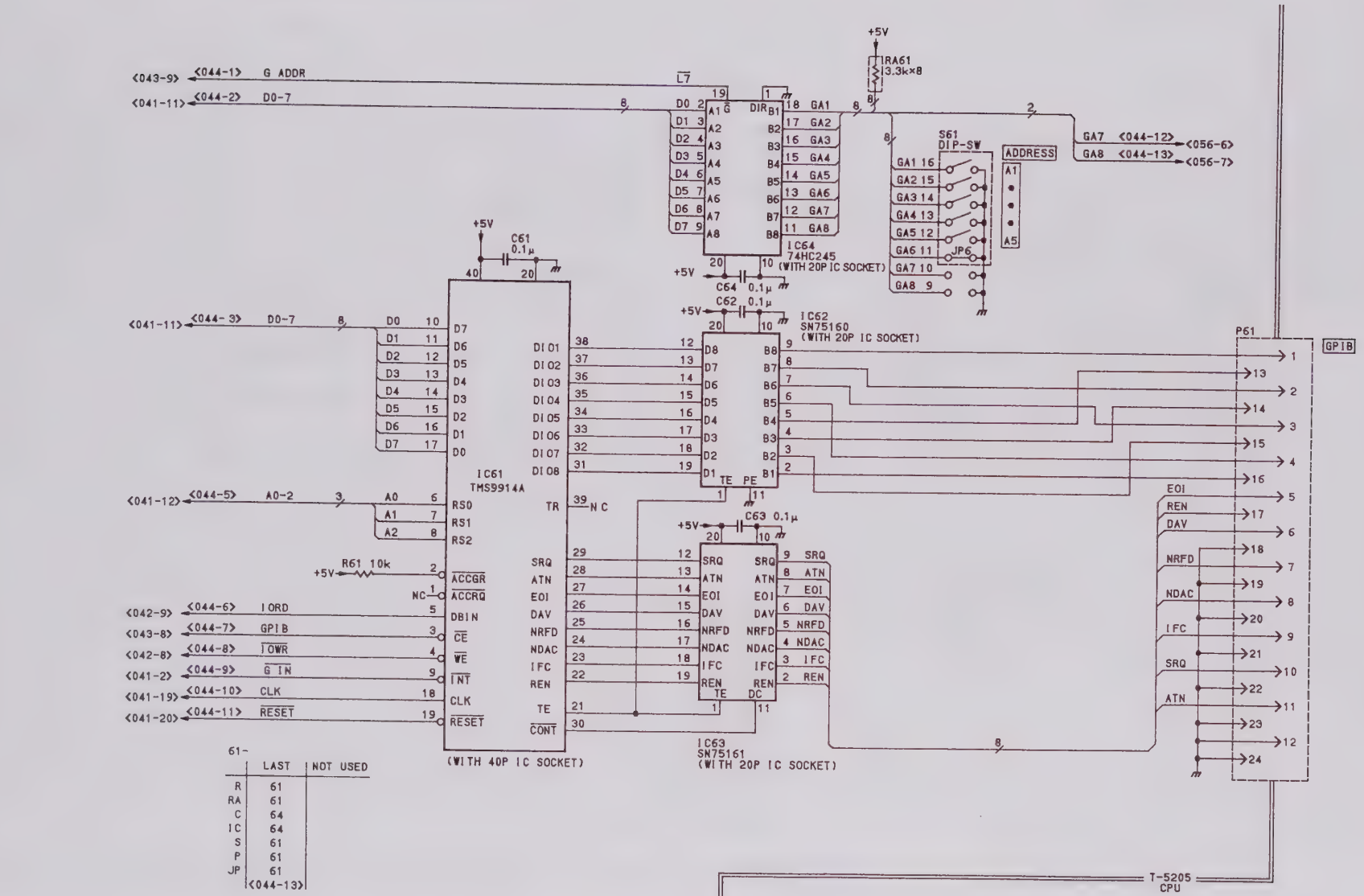
	LAST	NOT USED
R	112	
VR	101	
C	106	
Q	101	
IC	101	
P	105	
JP	104	
	(032-4)	


IC1
TMPZ84C011AF
(CPU)
RMT ST
G IN
KEY IN
KEY DATA
TO SECAM D/A
(121) P1
P2
P3(NC)
RA1 47k×4
RA2 47k×8
RA3 47k×8
RA4 47k×8
RA5 47k×8
RA6 47k×8
RA7 47k×8
RA8 47k×8
RA9 47k×8
RA10 47k×4
RA11 47k×4
R1 47k
R2 10k
R3 4.7k
R4 4.7k
R5 1k
C1 0.1µ
C2 0.1µ
C3 0.1µ
C4 22p (FM)
C5 27p (FM)
C6 0.1µ
C7 2.2µ 50V
C8 0.1µ
X1 8MHz
JP1
JP2
IC2 7705
P1
FROM A
TO A
D0-7 (041-11)
A0-15 (041-12)
CONT (041-13)
IORQ (041-14)
MREQ (041-15)
WR (041-17)
RD (041-18)
WAIT (041-18)
CLK (041-19)
RESET (041-20)
RESET (041-21)
TVDC DATA (041-22)
RMT BUSY (041-9)
RMT (041-10)
RF DATA (041-5)
D/A DATA (041-6)
1-
LAST
NOT USED
R 8
RA 11
C 5
IC 2
X 1
P 3
JP 2
(041-22) 7.8
T-5205
CPU


IC22 27C512 (WITH 28P IC SOCKET)
(8000-0DFFFH)
IC23 RAM 32k×8
(0E000-0FFFFH)
IC24 : 74HC10
IC25 : 74HC32
IC26 74HC32
Q21 2SA1015-Y
Q22 2SC1815-Y
D21 RD2.4ESAB2
D22 GMB01
D23 GMG01
BA21 3-51FTA (YUASA)
MEMORY MAP
SYSTEM RAM
ROM & RAM
DATA ROM
SYSTEM ROM
0FFFFH
0E000H
0DFFFH
0C000H
0BFFFH
8000H
7FFFH
0000H
T-5205 CPU

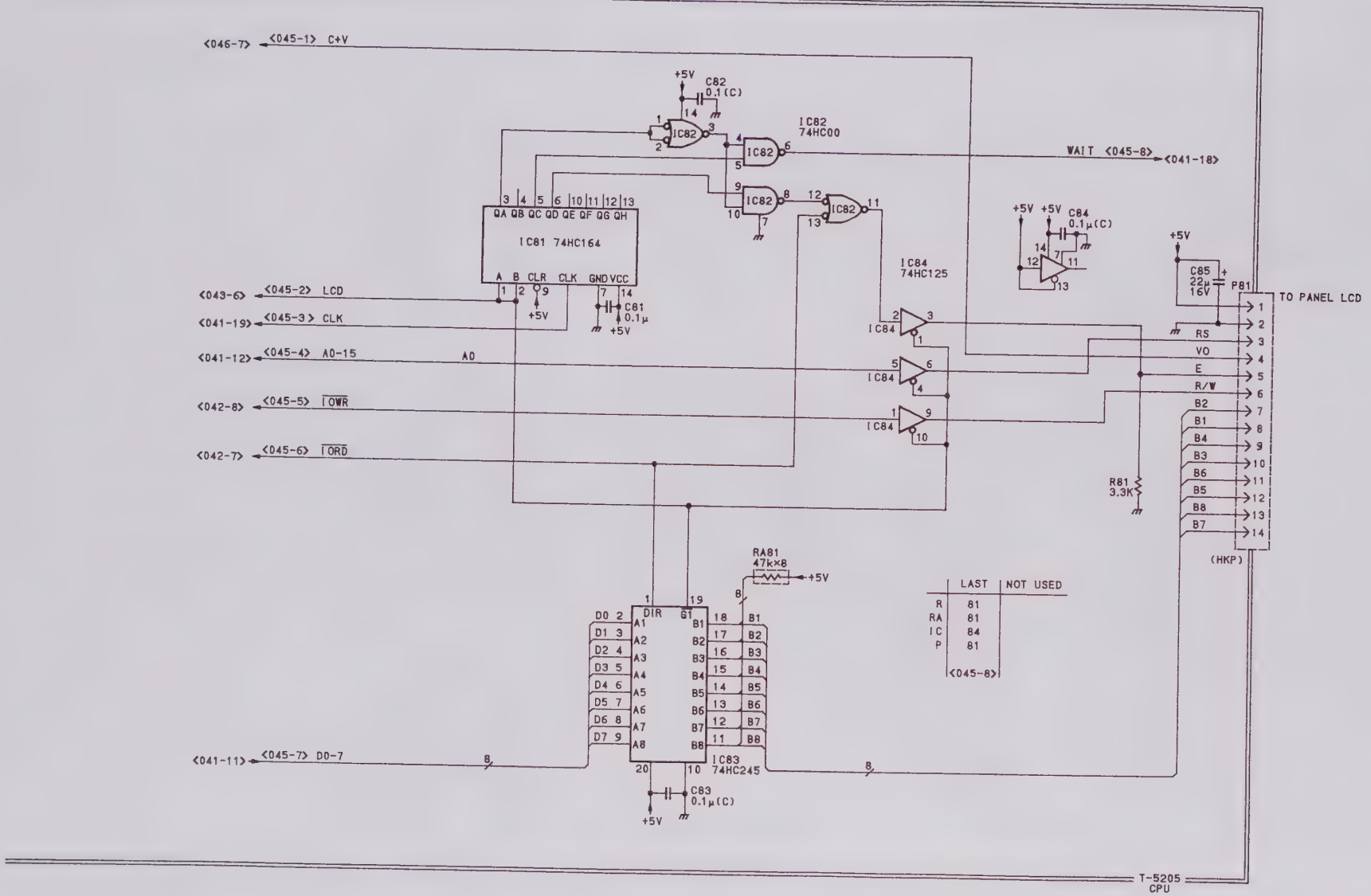
042
CPU
6-6

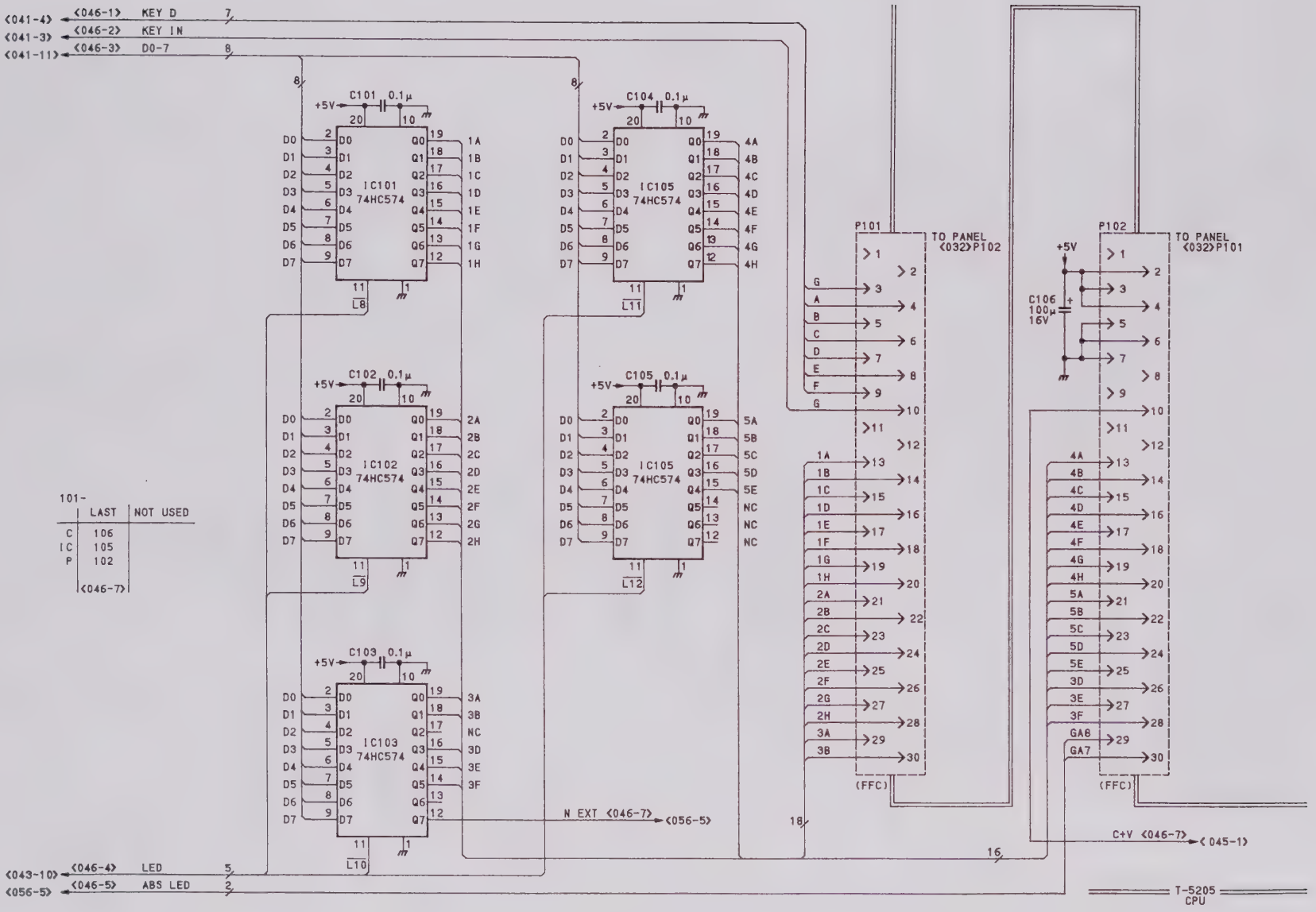

P41
PCB MALE HEADER
609-5027
D7 D6 D5 D4 D3 D2 D1 D0 INT EV HALT MREQ IORQ WR RD BUSACK WAIT BUSREQ RESET M1 RFSH A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 NMI CLK
<041-11> <043-1> D0-7 8
<041-13> <043-2> CONT 15
<041-17> <043-14> RD 16
<041-10> <043-3> A0-15 7
<041-5> <043-5> RF DATA 7
+5V
R41 47k
C41 22µ 16V
C46 22µ16V
P42 CK DIN LAT1 LAT2 LAT3 UN 1 UN 2
TO RF <145>P400
C45 100µ16V
P43
FROM POWER <021>P3
C41 0.1µ
IC41 74HC138
SYSTEM <043-7> <049-1>
IC43
C43 0.1µ
IC42 74HC138
LED <043-10> <046-4>
C43 0.1µ(C)
IC43 74HC00
<042-8> <043-12> IOWR
C43 0.1µ
IC44 74HC138
L0 LCD <043-6> <045-2>
<041-14> <043-4> IORQ
L6 GPIB <043-8> <044-7>
C48 0.1µ
IC45 74HC138
L13 REMOTE <043-11> <047-6>
L14
L7 G ADDR <043-9> <044-1>
<042-7> <043-13> IORD
41-
LAST HOT USED
R 41
C 48
IC 45
P 43
<043-14>
T-5205 CPU

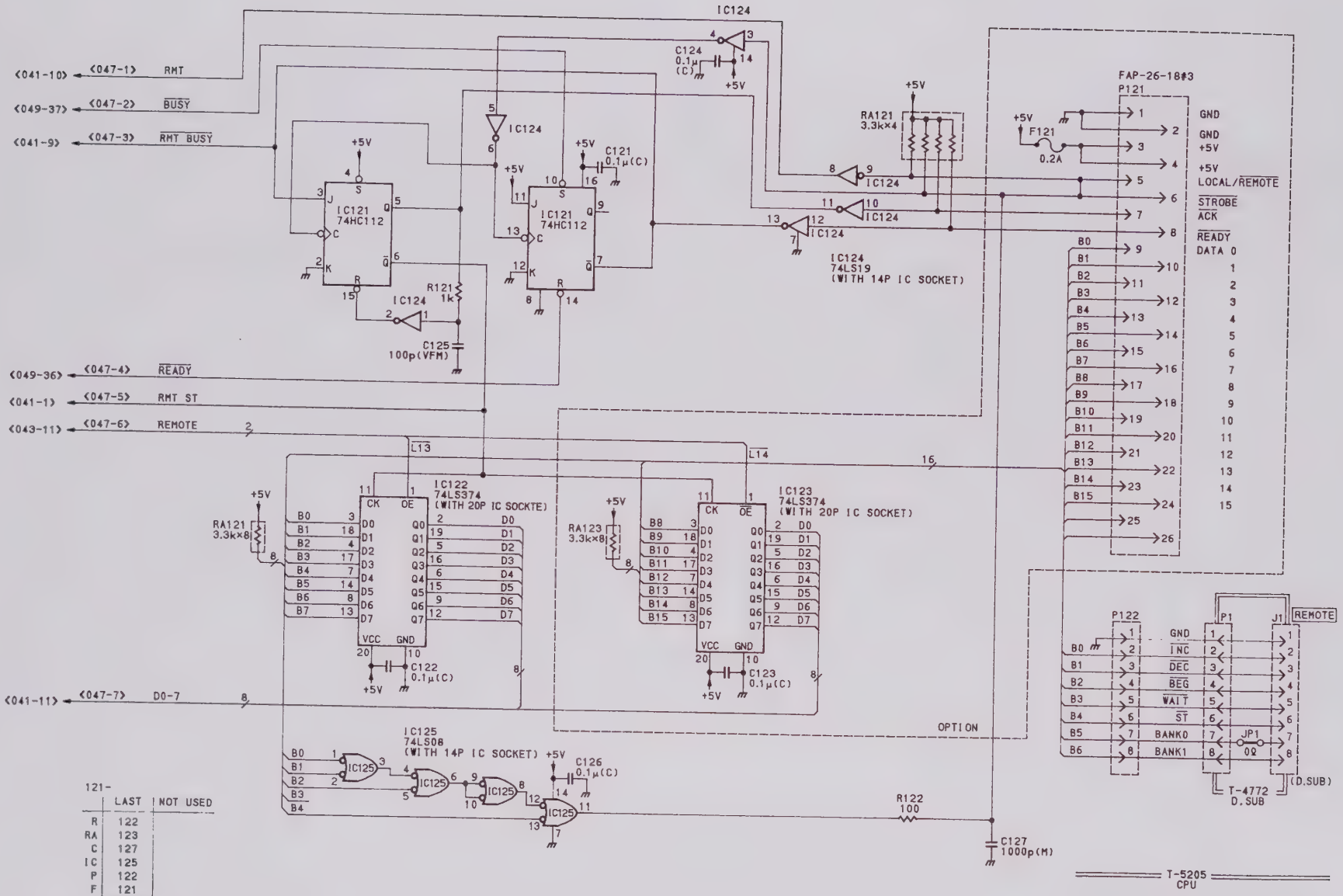


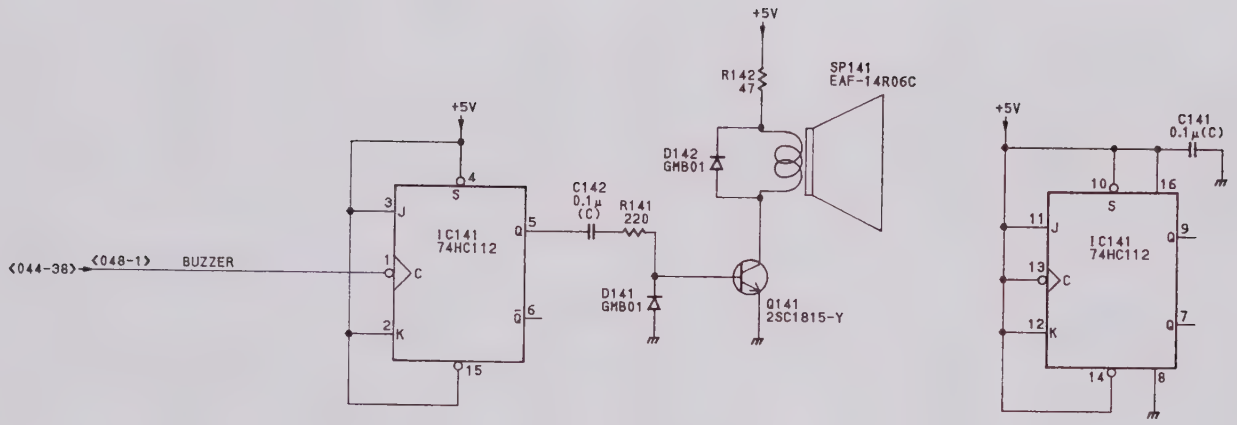
61-

	LAST	NOT USED
R	61	
RA	61	
C	64	
IC	64	
S	61	
P	61	
JP	61	
	<044-13>	


<046-7> <045-1> C+V
+5V C82 0.1(C)
IC82 74HC00
IC82
WAIT <045-8> <041-18>
IC81 74HC164
QA QB QC QD QE QF QG QH
A B CLR CLK GND VCC
C81 0.1μ
<043-6> <045-2> LCD
<041-19> <045-3> CLK
<041-12> <045-4> A0-15
A0
<042-8> <045-5> IOWR
<042-7> <045-6> IORD
IC84 74HC125
+5V +5V C84 0.1μ(C)
C85 22μ 16V
P81
TO PANEL LCD
RS
VO
E
R/W
B2
B1
B4
B3
B6
B5
B8
B7
(HKP)
R81 3.3K
RA81 47k×8
LAST NOT USED
R 81
RA 81
IC 84
P 81
<045-8>
DIR G1
D0 D1 D2 D3 D4 D5 D6 D7
A1 A2 A3 A4 A5 A6 A7 A8
B1 B2 B3 B4 B5 B6 B7 B8
IC83 74HC245
C83 0.1μ(C)
<041-11> <045-7> D0-7
T-5205 CPU

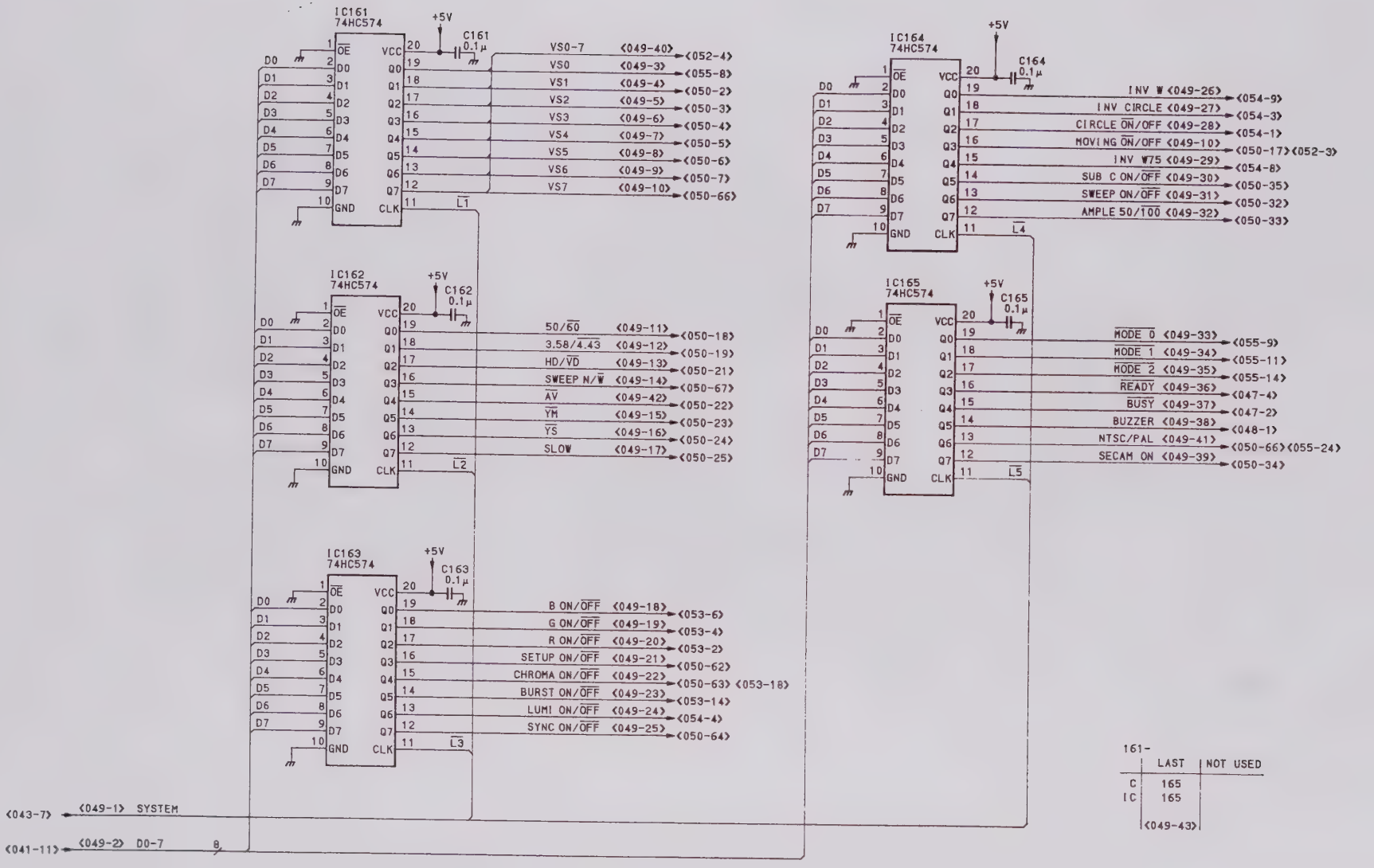

KEY D
KEY IN
D0-7
LED
ABS LED
IC101 74HC574
IC102 74HC574
IC103 74HC574
IC105 74HC574
C101 0.1µ
C102 0.1µ
C103 0.1µ
C104 0.1µ
C105 0.1µ
C106 100µ 16V
+5V
P101
P102
TO PANEL <032>P102
TO PANEL <032>P101
(FFC)
101-
LAST
NOT USED
C 106
IC 105
P 102
<046-7>
N EXT <046-7> <056-5>
C+V <046-7> <045-1>
T-5205 CPU

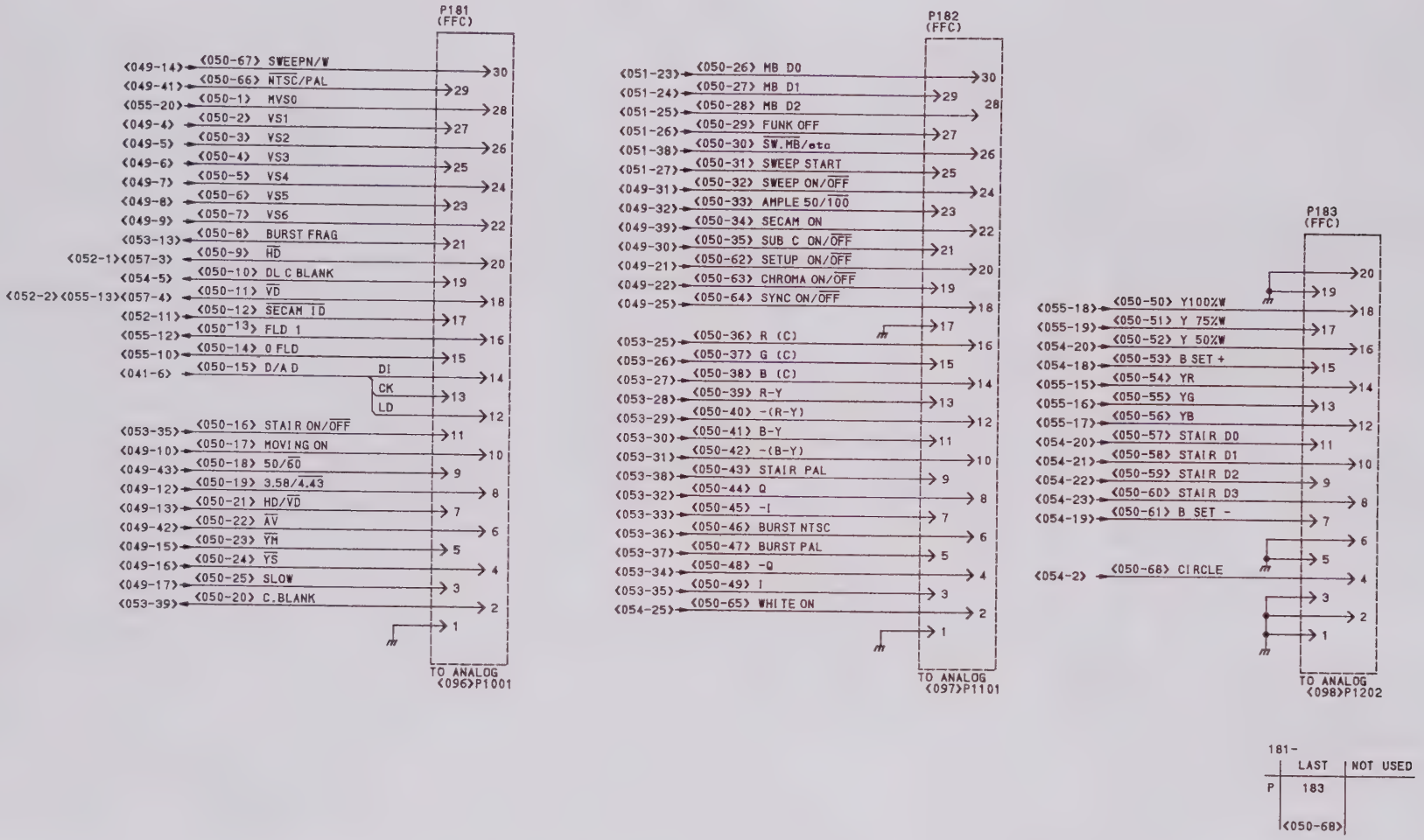

IC124
C124 0.1μ (C)
+5V
RA121 3.3k×4
FAP-26-18#3
P121
F121
0.2A
GND
GND
+5V
+5V
LOCAL/REMOTE
STROBE
ACK
READY
DATA 0
IC121 74HC112
C121 0.1μ(C)
R121 1k
C125 100p(VFM)
IC124 74LS19 (WITH 14P IC SOCKET)
(041-10) (047-1) RMT
(049-37) (047-2) BUSY
(041-9) (047-3) RMT BUSY
(049-36) (047-4) READY
(041-1) (047-5) RMT ST
(043-11) (047-6) REMOTE
(041-11) (047-7) D0-7
L13
L14
IC122 74LS374 (WITH 20P IC SOCKTE)
IC123 74LS374 (WITH 20P IC SOCKET)
RA123 3.3k×8
C122 0.1μ(C)
C123 0.1μ(C)
OPTION
IC125 74LS08 (WITH 14P IC SOCKET)
C126 0.1μ(C)
R122 100
C127 1000p(M)
P122
P1
J1
REMOTE
GND
INC
DEC
BEG
WAIT
ST
BANK0
BANK1
JP1
0Ω
T-4772 D.SUB
(D.SUB)
T-5205 CPU
121-
LAST
NOT USED
R 122
RA 123
C 127
IC 125
P 122
F 121
(047-7)

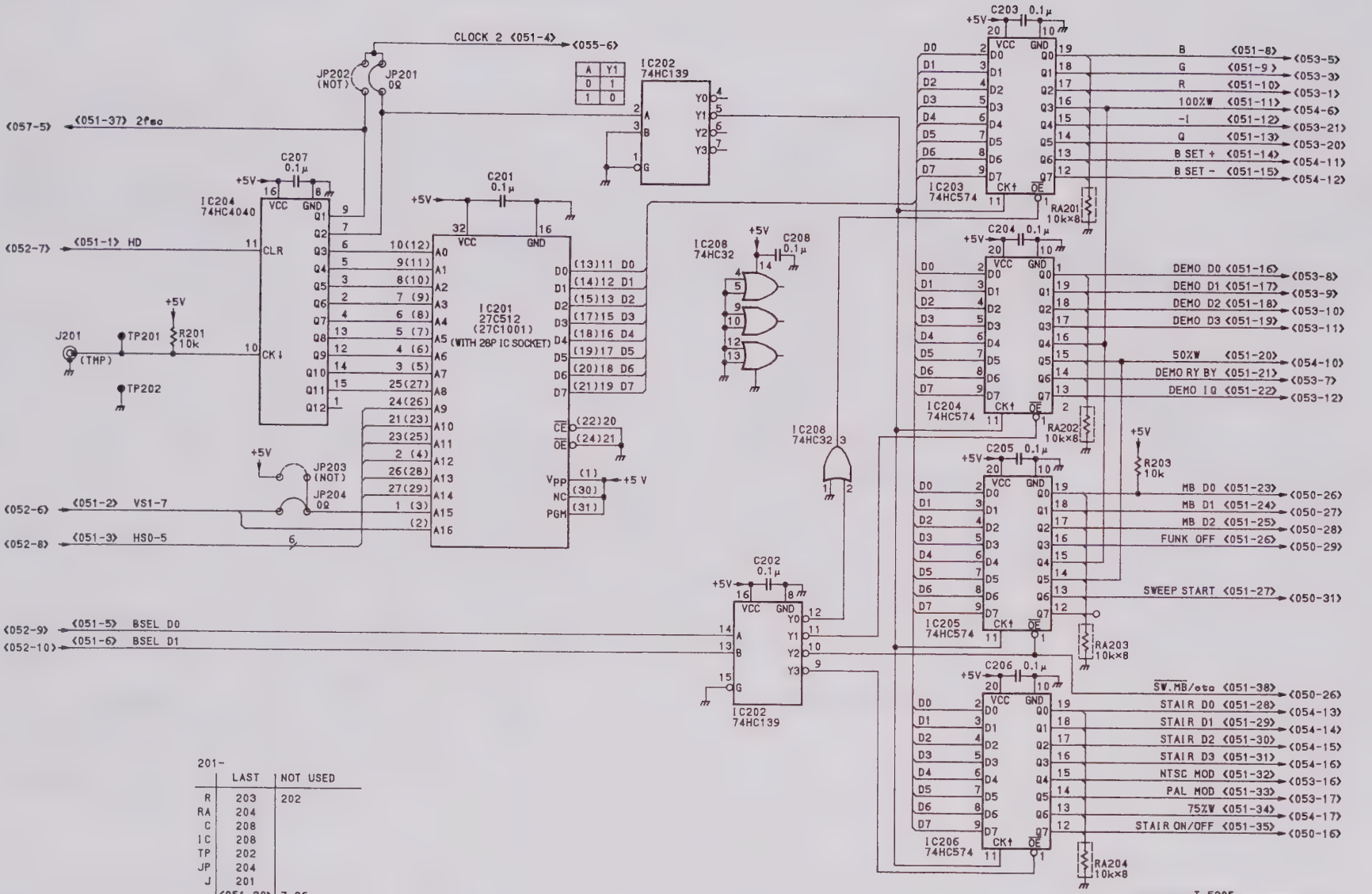


141-

	LAST	NOT USED
R	142	
C	142	
Q	141	
D	142	
IC	141	
SP	141	
	<048-1>	

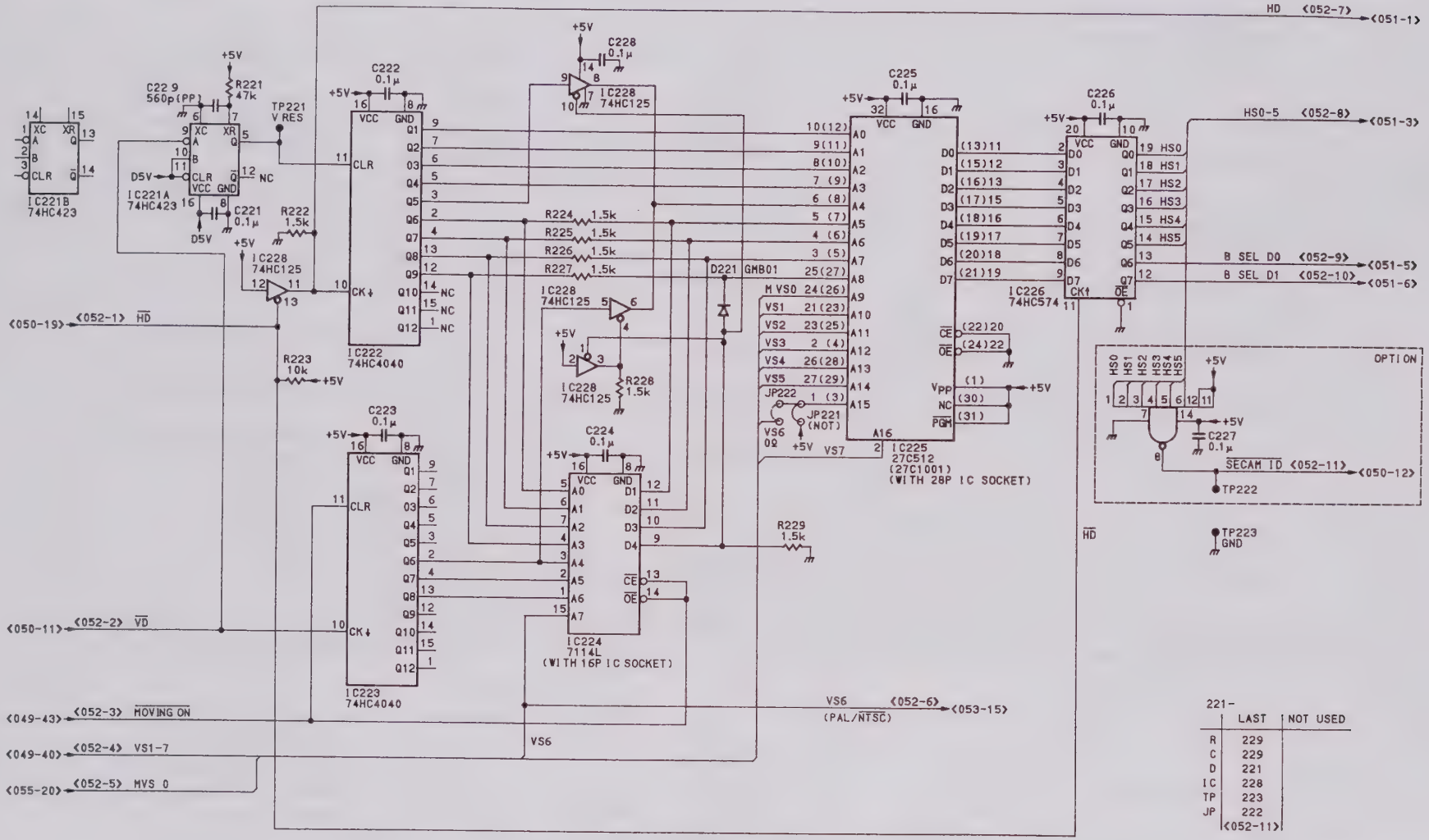

IC161
74HC574
+5V
C161
0.1μ
VS0-7 <049-40> <052-4>
VS0 <049-3> <055-8>
VS1 <049-4> <050-2>
VS2 <049-5> <050-3>
VS3 <049-6> <050-4>
VS4 <049-7> <050-5>
VS5 <049-8> <050-6>
VS6 <049-9> <050-7>
VS7 <049-10> <050-66>
L1
IC162
74HC574
+5V
C162
0.1μ
50/60 <049-11> <050-18>
3.58/4.43 <049-12> <050-19>
HD/VD <049-13> <050-21>
SWEEP N/W <049-14> <050-67>
AV <049-42> <050-22>
YM <049-15> <050-23>
YS <049-16> <050-24>
SLOW <049-17> <050-25>
L2
IC163
74HC574
+5V
C163
0.1μ
B ON/OFF <049-18> <053-6>
G ON/OFF <049-19> <053-4>
R ON/OFF <049-20> <053-2>
SETUP ON/OFF <049-21> <050-62>
CHROMA ON/OFF <049-22> <050-63> <053-18>
BURST ON/OFF <049-23> <053-14>
LUMI ON/OFF <049-24> <054-4>
SYNC ON/OFF <049-25> <050-64>
L3
IC164
74HC574
+5V
C164
0.1μ
INV W <049-26> <054-9>
INV CIRCLE <049-27> <054-3>
CIRCLE ON/OFF <049-28> <054-1>
MOVING ON/OFF <049-10> <050-17> <052-3>
INV W75 <049-29> <054-8>
SUB C ON/OFF <049-30> <050-35>
SWEEP ON/OFF <049-31> <050-32>
AMPLE 50/100 <049-32> <050-33>
L4
IC165
74HC574
+5V
C165
0.1μ
MODE 0 <049-33> <055-9>
MODE 1 <049-34> <055-11>
MODE 2 <049-35> <055-14>
READY <049-36> <047-4>
BUSY <049-37> <047-2>
BUZZER <049-38> <048-1>
NTSC/PAL <049-41> <050-66> <055-24>
SECAM ON <049-39> <050-34>
L5
<043-7> <049-1> SYSTEM
<041-11> <049-2> D0-7 8
161-
LAST NOT USED
C 165
IC 165
<049-43>

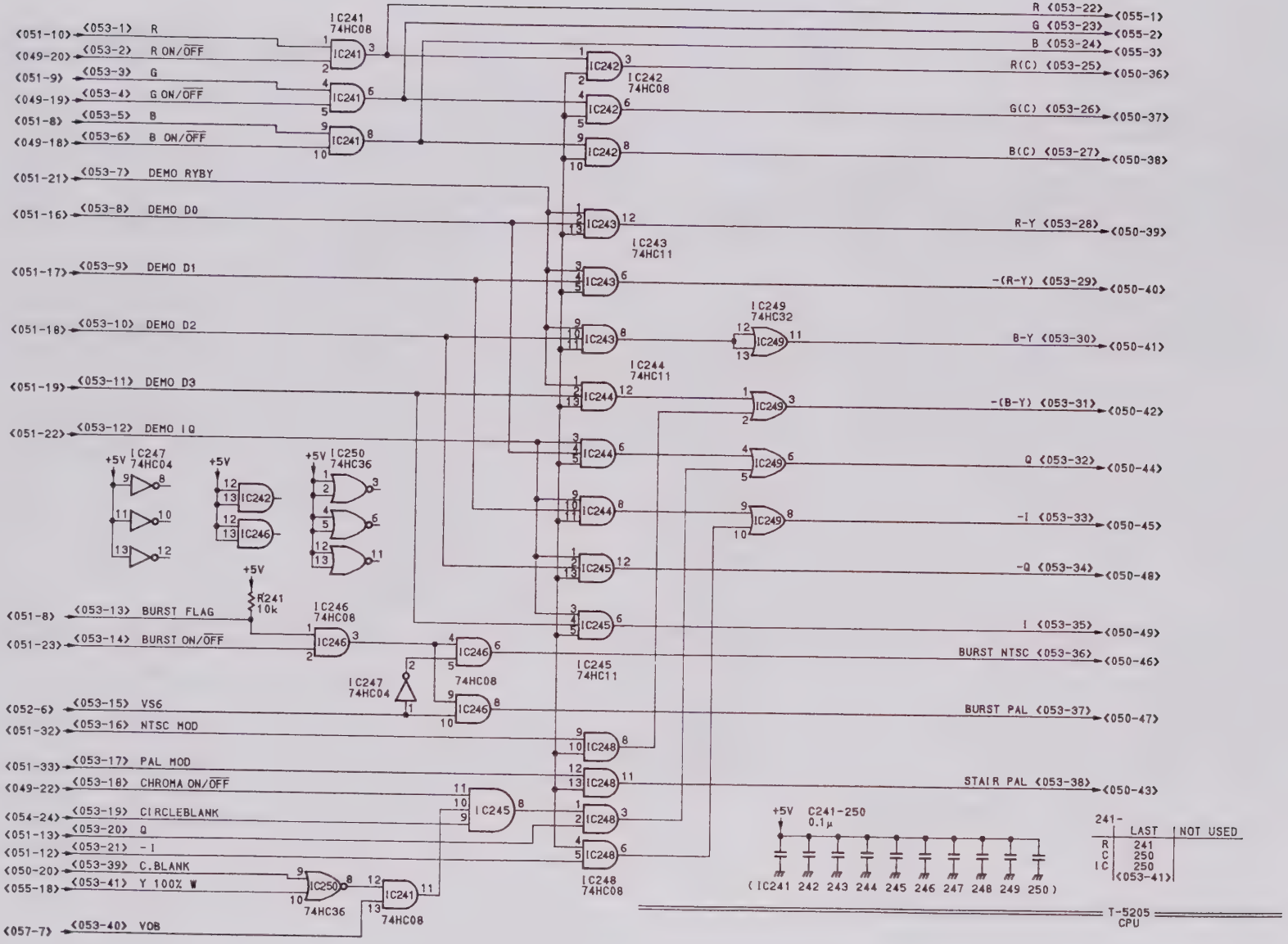

P181
(FFC)
<049-14> <050-67> SWEEPN/W 30
<049-41> <050-66> NTSC/PAL 29
<055-20> <050-1> MVS0 28
<049-4> <050-2> VS1 27
<049-5> <050-3> VS2 26
<049-6> <050-4> VS3 25
<049-7> <050-5> VS4 24
<049-8> <050-6> VS5 23
<049-9> <050-7> VS6 22
<053-13> <050-8> BURST FRAG 21
<052-1><057-3> <050-9> HD 20
<054-5> <050-10> DL C BLANK 19
<052-2><055-13><057-4> <050-11> VD 18
<052-11> <050-12> SECAM ID 17
<055-12> <050-13> FLD 1 16
<055-10> <050-14> 0 FLD 15
<041-6> <050-15> D/A D DI 14
CK 13
LD 12
<053-35> <050-16> STAIR ON/OFF 11
<049-10> <050-17> MOVING ON 10
<049-43> <050-18> 50/60 9
<049-12> <050-19> 3.58/4.43 8
<049-13> <050-21> HD/VD 7
<049-42> <050-22> AV 6
<049-15> <050-23> YH 5
<049-16> <050-24> YS 4
<049-17> <050-25> SLOW 3
<053-39> <050-20> C.BLANK 2
1
TO ANALOG
<096>P1001
P182
(FFC)
<051-23> <050-26> MB D0 30
<051-24> <050-27> MB D1 29
<051-25> <050-28> MB D2 28
<051-26> <050-29> FUNK OFF 27
<051-38> <050-30> SW.MB/etc 26
<051-27> <050-31> SWEEP START 25
<049-31> <050-32> SWEEP ON/OFF 24
<049-32> <050-33> AMPLE 50/100 23
<049-39> <050-34> SECAM ON 22
<049-30> <050-35> SUB C ON/OFF 21
<049-21> <050-62> SETUP ON/OFF 20
<049-22> <050-63> CHROMA ON/OFF 19
<049-25> <050-64> SYNC ON/OFF 18
17
<053-25> <050-36> R (C) 16
<053-26> <050-37> G (C) 15
<053-27> <050-38> B (C) 14
<053-28> <050-39> R-Y 13
<053-29> <050-40> -(R-Y) 12
<053-30> <050-41> B-Y 11
<053-31> <050-42> -(B-Y) 10
<053-38> <050-43> STAIR PAL 9
<053-32> <050-44> Q 8
<053-33> <050-45> -I 7
<053-36> <050-46> BURST NTSC 6
<053-37> <050-47> BURST PAL 5
<053-34> <050-48> -Q 4
<053-35> <050-49> I 3
<054-25> <050-65> WHITE ON 2
1
TO ANALOG
<097>P1101
P183
(FFC)
20
19
<055-18> <050-50> Y100%W 18
<055-19> <050-51> Y 75%W 17
<054-20> <050-52> Y 50%W 16
<054-18> <050-53> B SET + 15
<055-15> <050-54> YR 14
<055-16> <050-55> YG 13
<055-17> <050-56> YB 12
<054-20> <050-57> STAIR D0 11
<054-21> <050-58> STAIR D1 10
<054-22> <050-59> STAIR D2 9
<054-23> <050-60> STAIR D3 8
<054-19> <050-61> B SET - 7
6
5
<054-2> <050-68> CIRCLE 4
3
2
1
TO ANALOG
<098>P1202
181-
LAST
NOT USED
P
183
<050-68>

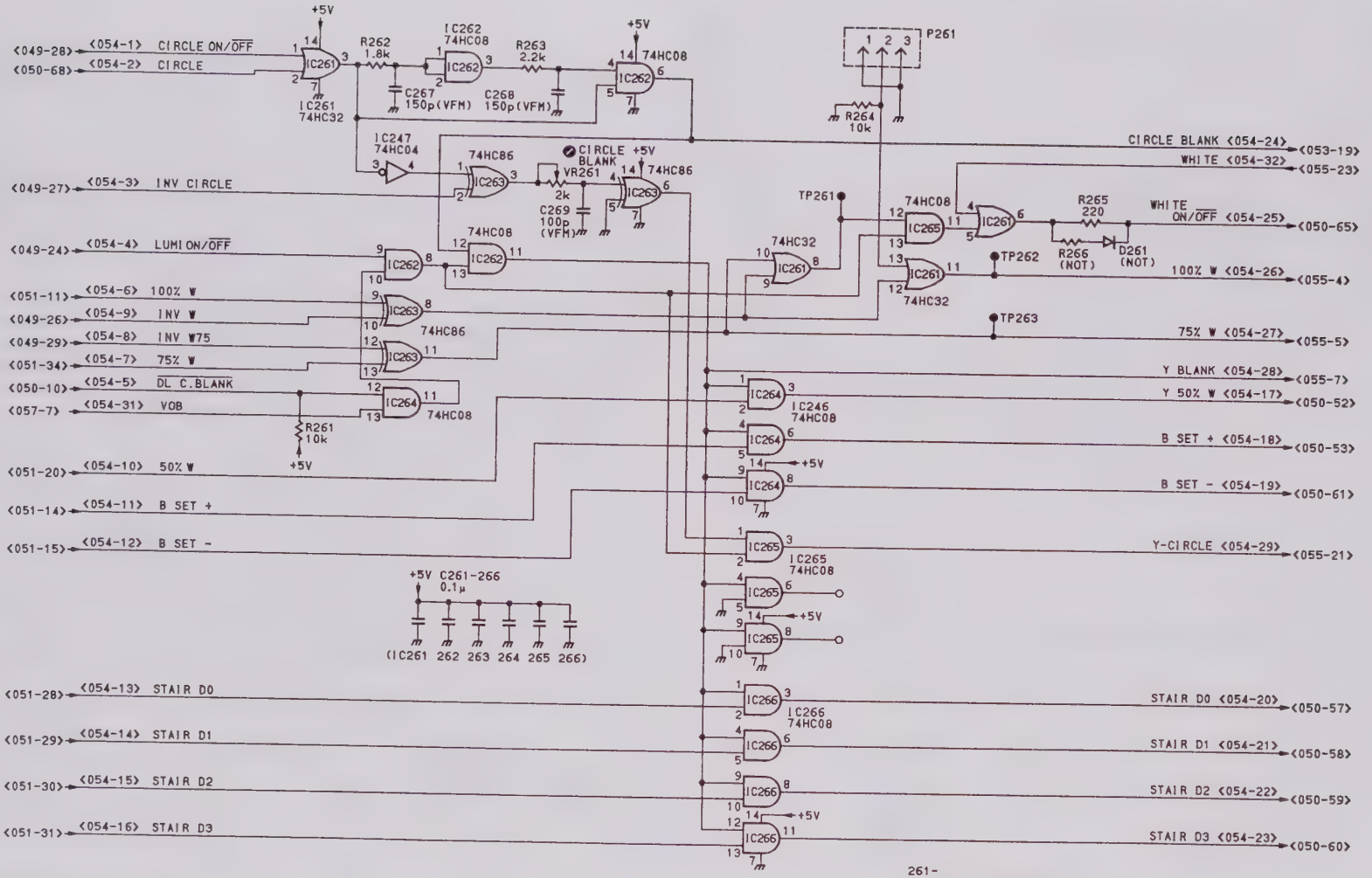


201-

	LAST	NOT USED
R	203	202
RA	204	
C	208	
IC	208	
TP	202	
JP	204	
J	201	
	⟨051-38⟩	7.36


HD 〈052-7〉 〈051-1〉
HS0-5 〈052-8〉 〈051-3〉
B SEL D0 〈052-9〉 〈051-5〉
B SEL D1 〈052-10〉 〈051-6〉
OPTION
SECAM ID 〈052-11〉 〈050-12〉
TP222
TP223 GND
IC221B 74HC423
IC221A 74HC423
IC222 74HC4040
IC223 74HC4040
IC224 7114L (WITH 16P IC SOCKET)
IC225 27C512 (27C1001) (WITH 28P IC SOCKET)
IC226 74HC574
IC228 74HC125
C221 0.1μ
C222 0.1μ
C223 0.1μ
C224 0.1μ
C225 0.1μ
C226 0.1μ
C227 0.1μ
C228 0.1μ
C229 560p(PP)
R221 47k
R222 1.5k
R223 10k
R224 1.5k
R225 1.5k
R226 1.5k
R227 1.5k
R228 1.5k
R229 1.5k
TP221 V RES
D221 GMB01
JP222
JP221 (NOT)
VS6 0Ω
〈050-19〉 〈052-1〉 HD
〈050-11〉 〈052-2〉 VD
〈049-43〉 〈052-3〉 MOVING ON
〈049-40〉 〈052-4〉 VS1-7
〈055-20〉 〈052-5〉 MVS 0
VS6 〈052-6〉 〈053-15〉
(PAL/NTSC)
221-
LAST NOT USED
R 229
C 229
D 221
IC 228
TP 223
JP 222
〈052-11〉

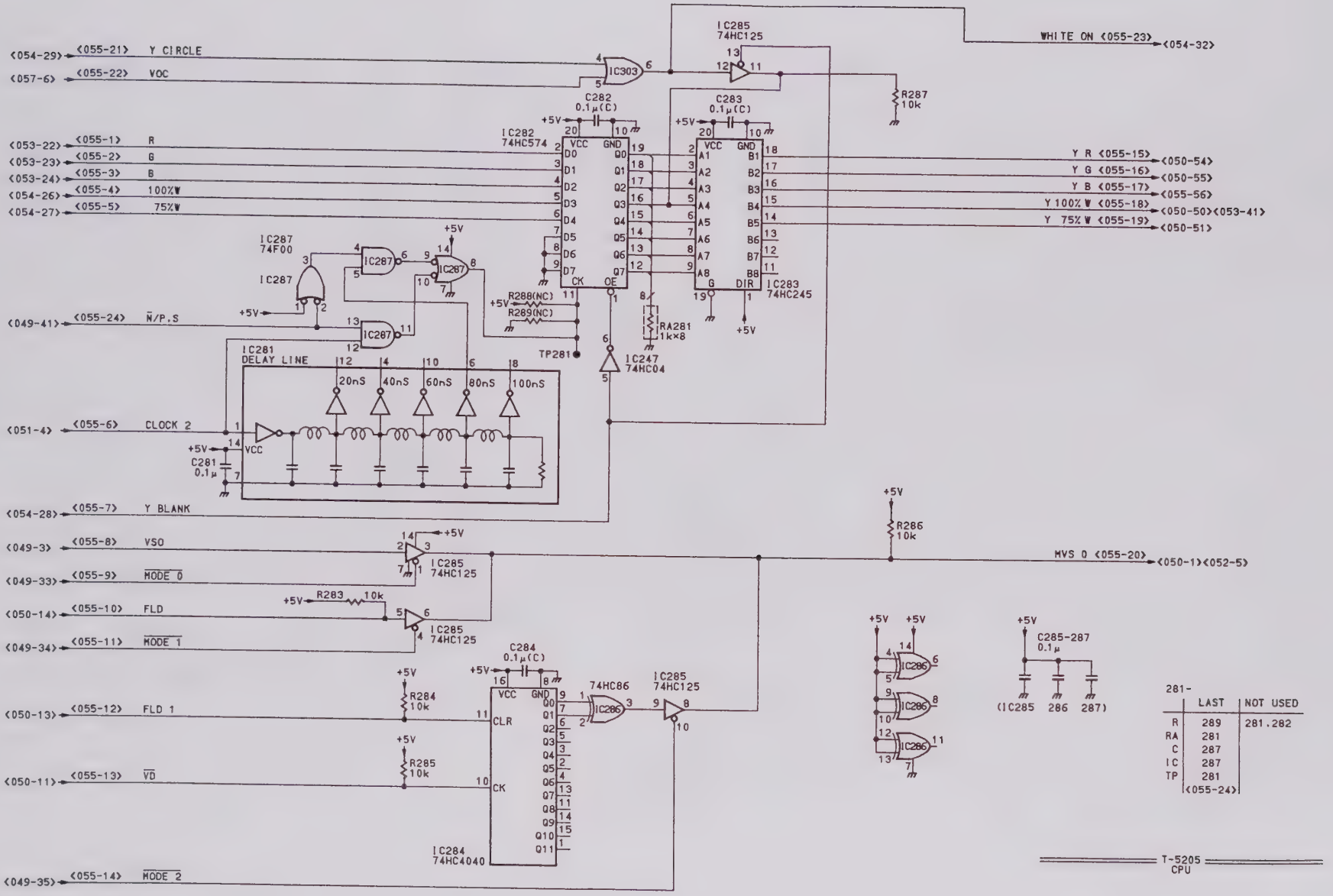

IC241 74HC08
IC242 74HC08
IC243 74HC11
IC244 74HC11
IC245 74HC11
IC246 74HC08
IC247 74HC04
IC248 74HC08
IC249 74HC32
IC250 74HC36
R241 10k
+5V
C241-250 0.1μ
(IC241 242 243 244 245 246 247 248 249 250)
241- LAST NOT USED
R 241
C 250
IC 250
(053-41)
T-5205 CPU
(051-10) (053-1) R
(049-20) (053-2) R ON/OFF
(051-9) (053-3) G
(049-19) (053-4) G ON/OFF
(051-8) (053-5) B
(049-18) (053-6) B ON/OFF
(051-21) (053-7) DEMO RYBY
(051-16) (053-8) DEMO D0
(051-17) (053-9) DEMO D1
(051-18) (053-10) DEMO D2
(051-19) (053-11) DEMO D3
(051-22) (053-12) DEMO IQ
(051-8) (053-13) BURST FLAG
(051-23) (053-14) BURST ON/OFF
(052-6) (053-15) VS6
(051-32) (053-16) NTSC MOD
(051-33) (053-17) PAL MOD
(049-22) (053-18) CHROMA ON/OFF
(054-24) (053-19) CIRCLEBLANK
(051-13) (053-20) Q
(051-12) (053-21) -I
(050-20) (053-39) C.BLANK
(055-18) (053-41) Y 100% W
(057-7) (053-40) VOB
R (053-22) (055-1)
G (053-23) (055-2)
B (053-24) (055-3)
R(C) (053-25) (050-36)
G(C) (053-26) (050-37)
B(C) (053-27) (050-38)
R-Y (053-28) (050-39)
-(R-Y) (053-29) (050-40)
B-Y (053-30) (050-41)
-(B-Y) (053-31) (050-42)
Q (053-32) (050-44)
-I (053-33) (050-45)
-Q (053-34) (050-48)
I (053-35) (050-49)
BURST NTSC (053-36) (050-46)
BURST PAL (053-37) (050-47)
STAIR PAL (053-38) (050-43)

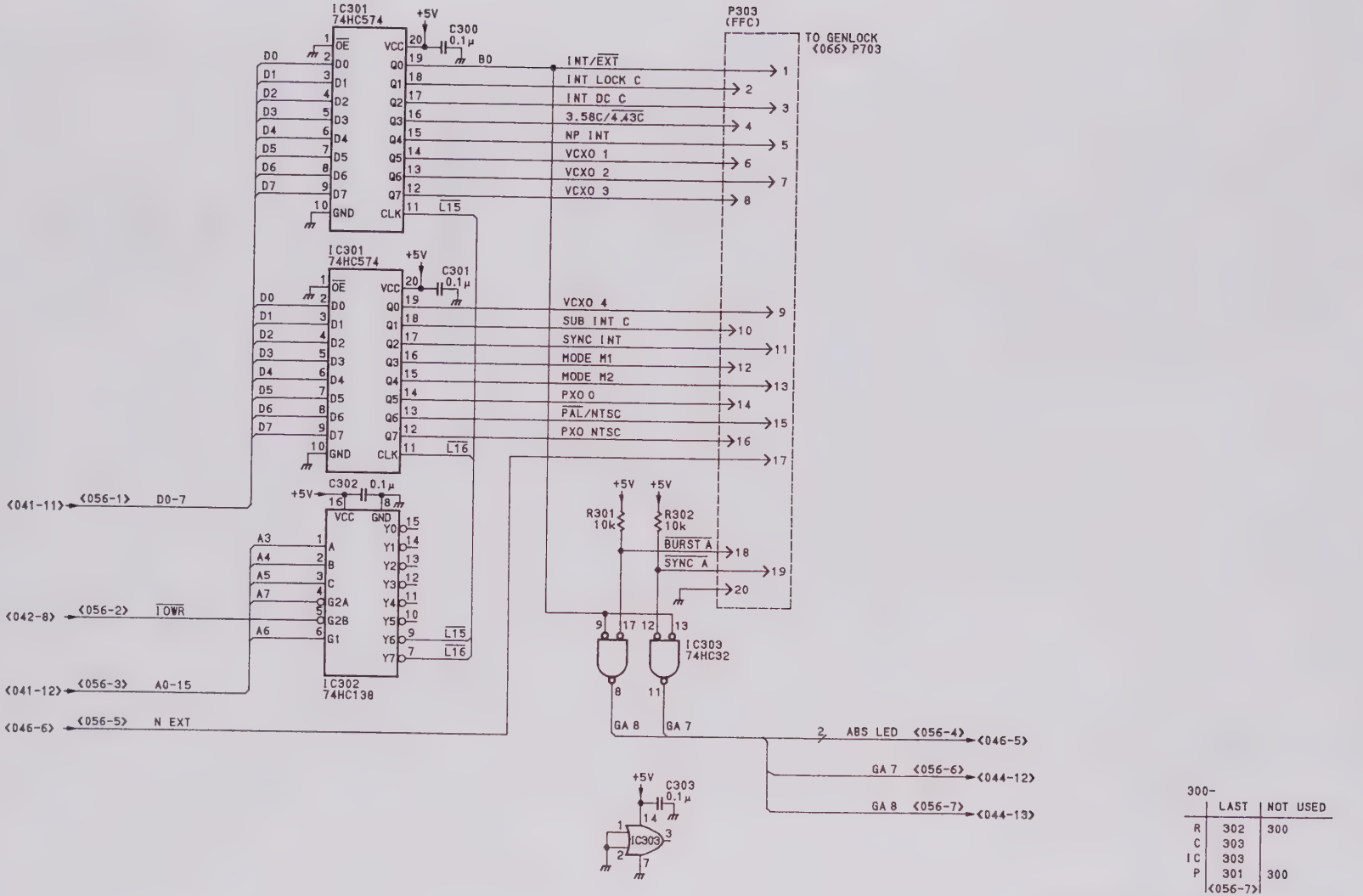


261-

	LAST	NOT USED
R	266	
VR	261	
C	269	
D	261	
IC	266	
TP	263	
P	261	
	<054-32>	

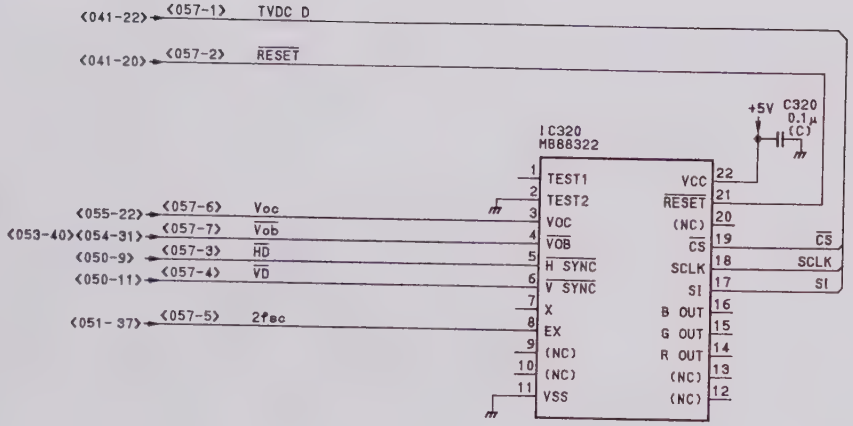
T-5205 CPU


〈054-29〉 〈055-21〉 Y CIRCLE
〈057-6〉 〈055-22〉 VOC
IC303
IC285 74HC125
WHITE ON 〈055-23〉 〈054-32〉
R287 10k
C282 0.1μ(C)
C283 0.1μ(C)
IC282 74HC574
IC283 74HC245
〈053-22〉 〈055-1〉 R
〈053-23〉 〈055-2〉 B
〈053-24〉 〈055-3〉 B
〈054-26〉 〈055-4〉 100%W
〈054-27〉 〈055-5〉 75%W
Y R 〈055-15〉 〈050-54〉
Y G 〈055-16〉 〈050-55〉
Y B 〈055-17〉 〈055-56〉
Y 100% W 〈055-18〉 〈050-50〉〈053-41〉
Y 75% W 〈055-19〉 〈050-51〉
IC287 74F00
IC287
R288(NC)
R289(NC)
TP281
RA281 1k×8
IC247 74HC04
〈049-41〉 〈055-24〉 N/P.S
IC281 DELAY LINE
20nS 40nS 60nS 80nS 100nS
〈051-4〉 〈055-6〉 CLOCK 2
C281 0.1μ
〈054-28〉 〈055-7〉 Y BLANK
R286 10k
〈049-3〉 〈055-8〉 VSO
〈049-33〉 〈055-9〉 MODE 0
IC285 74HC125
MVS 0 〈055-20〉 〈050-1〉〈052-5〉
R283 10k
〈050-14〉 〈055-10〉 FLD
〈049-34〉 〈055-11〉 MODE 1
C284 0.1μ(C)
74HC86
IC285 74HC125
R284 10k
〈050-13〉 〈055-12〉 FLD 1
R285 10k
〈050-11〉 〈055-13〉 VD
IC284 74HC4040
〈049-35〉 〈055-14〉 MODE 2
C285-287 0.1μ
(IC285 286 287)
281-
LAST NOT USED
R 289 281.282
RA 281
C 287
IC 287
TP 281
〈055-24〉
T-5205 CPU



300-	LAST	NOT USED
R	302	300
C	303	
IC	303	
P	301	300
	(056-7)	

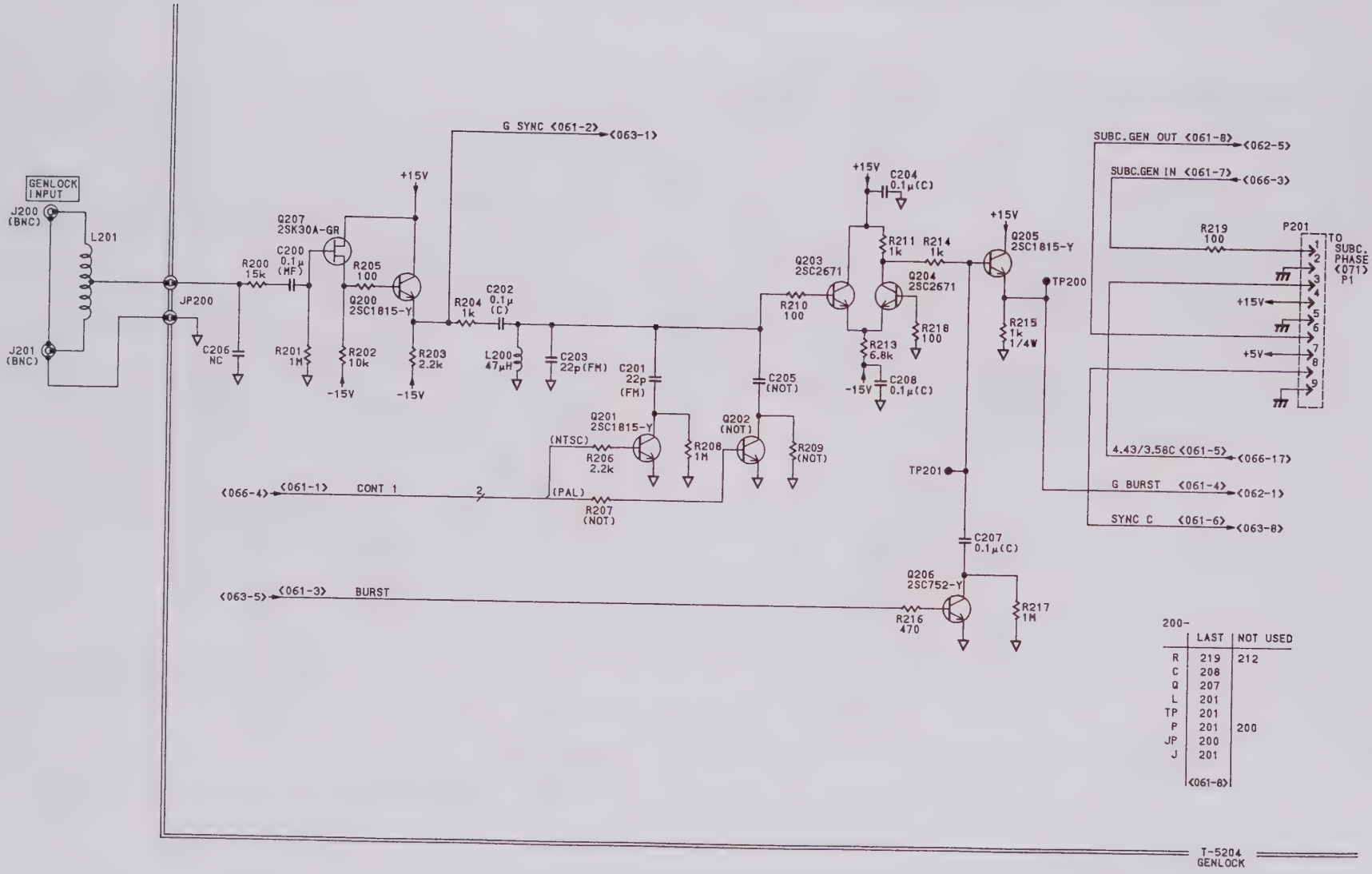
T-5205
CPU



320-

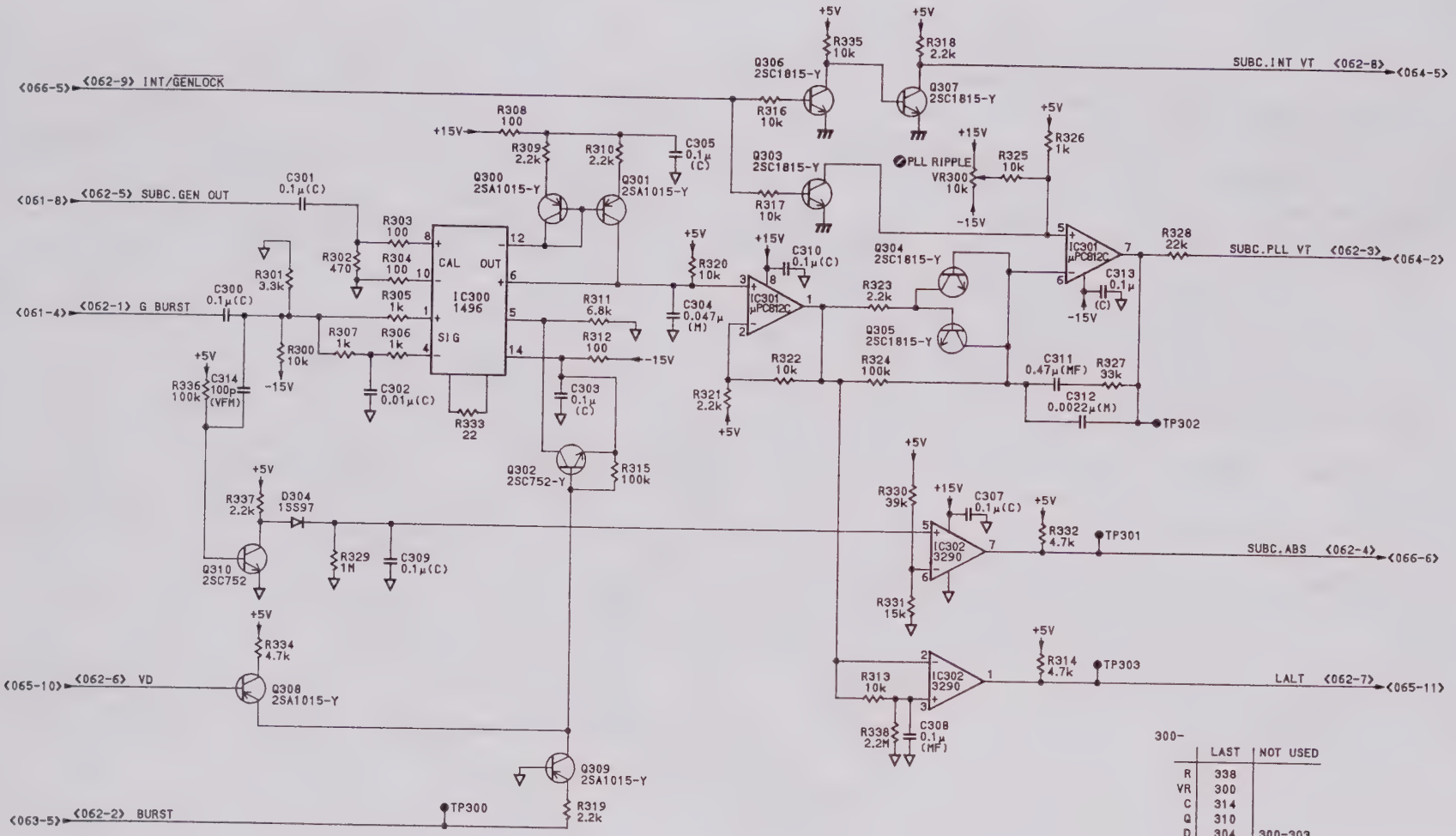
	LAST	NOT USED
C	320	
IC	320	
	(057-7)	

T-5205
CPU



200-

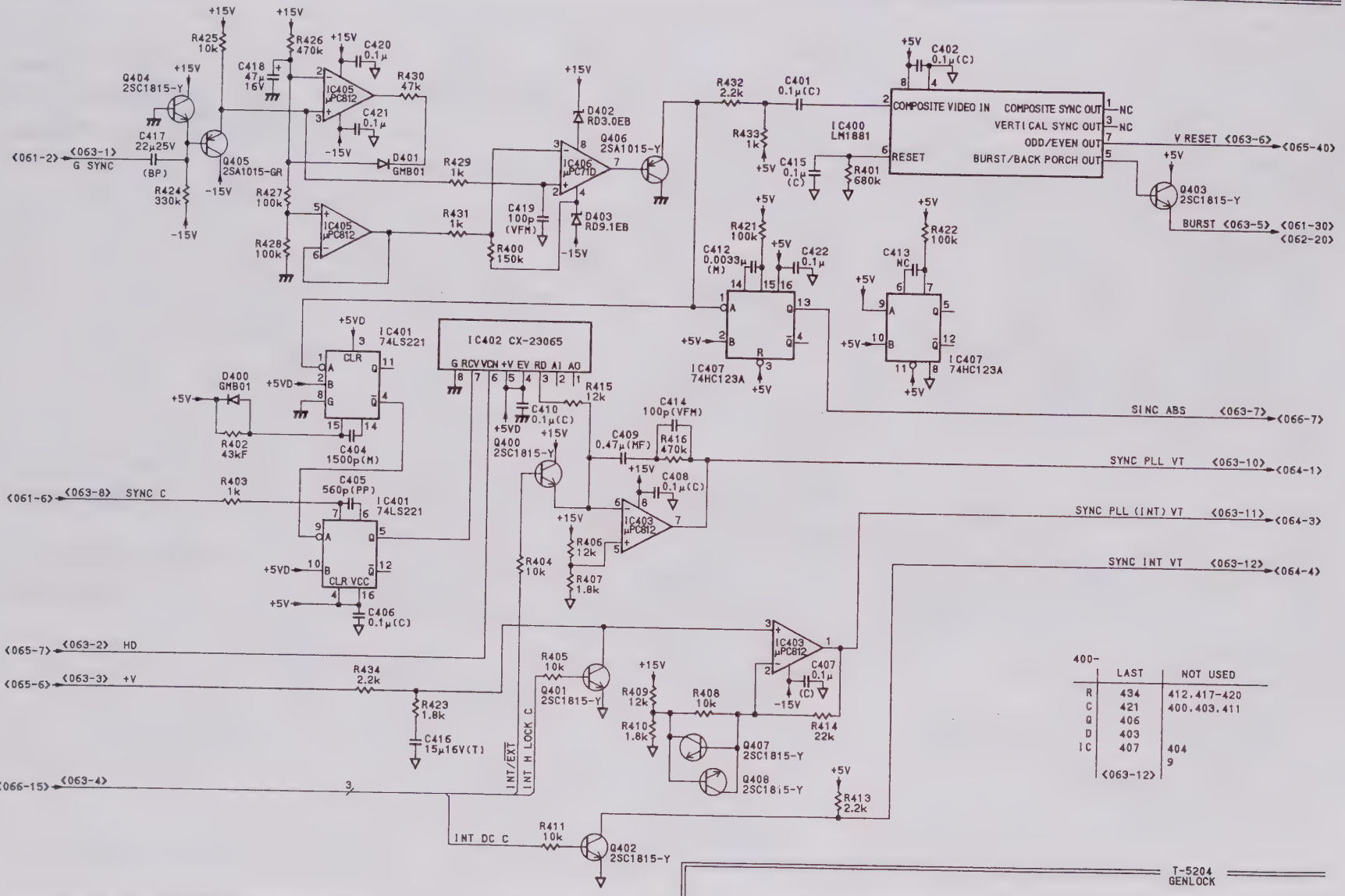
	LAST	NOT USED
R	219	212
C	208	
Q	207	
L	201	
TP	201	
P	201	200
JP	200	
J	201	
	<061-8>	



300-

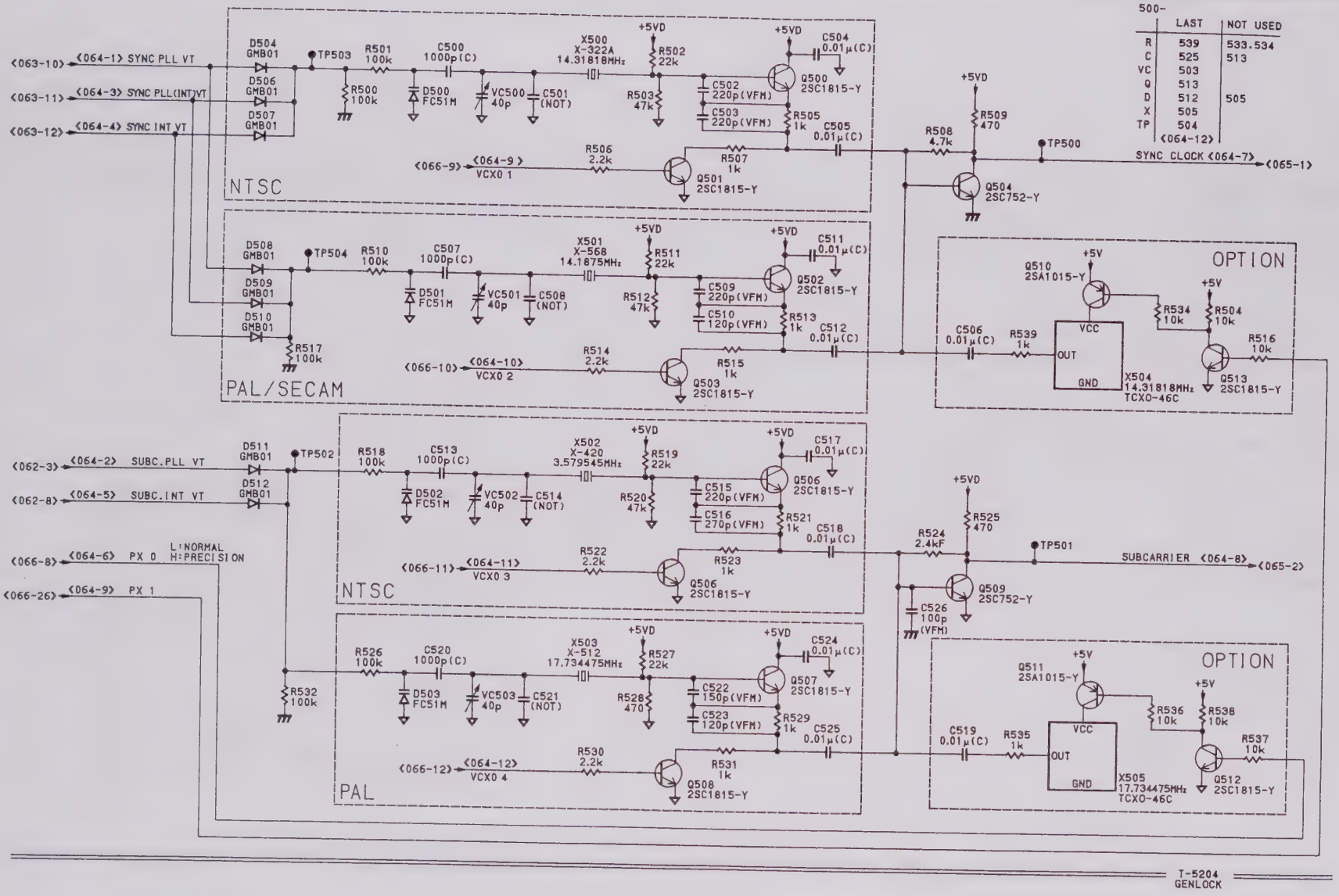
	LAST	NOT USED
R	338	
VR	300	
C	314	
Q	310	
D	304	300-303
IC	302	
TP	303	
<062-9>		

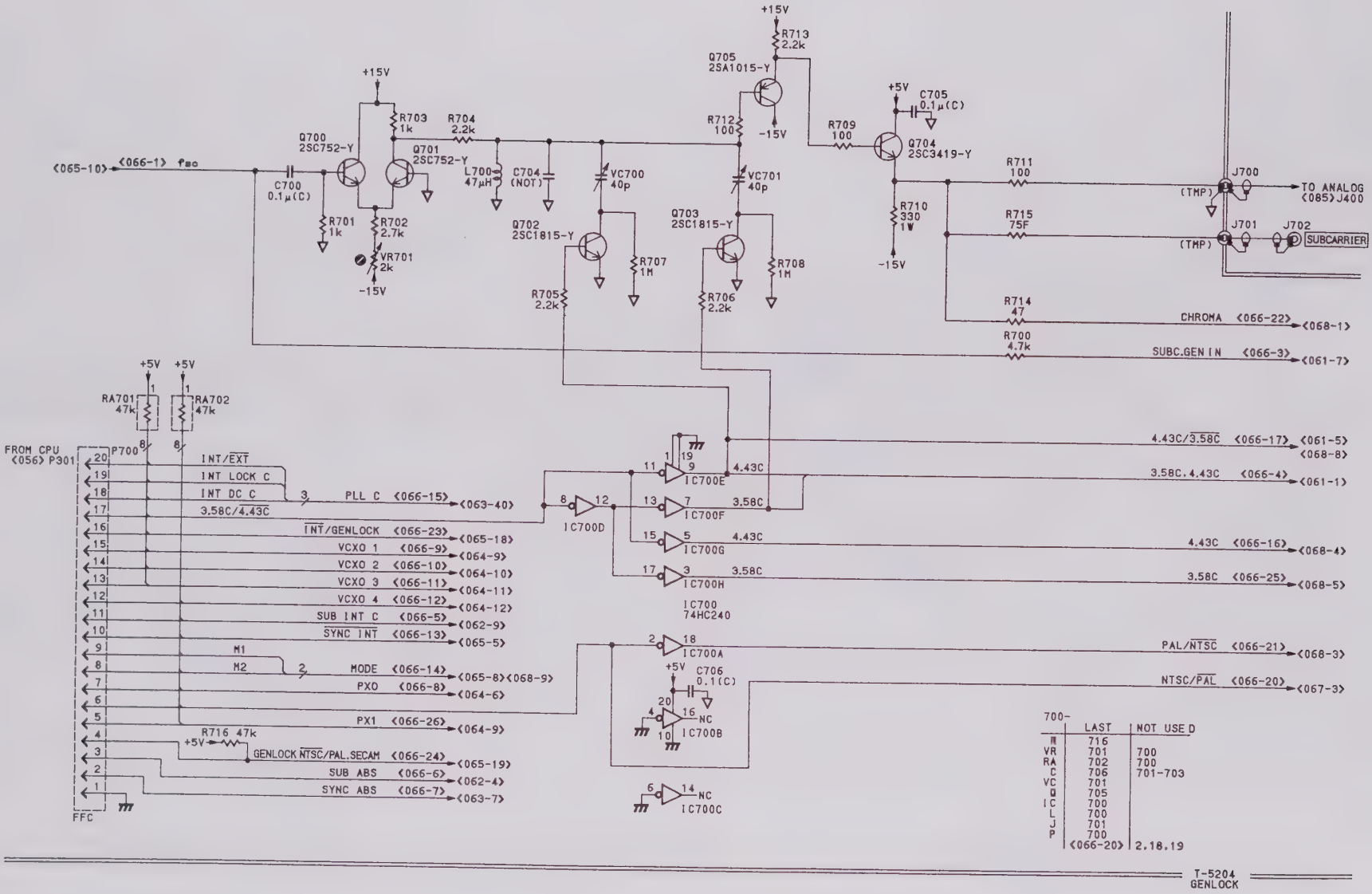
T-5204
GENLOCK



400-

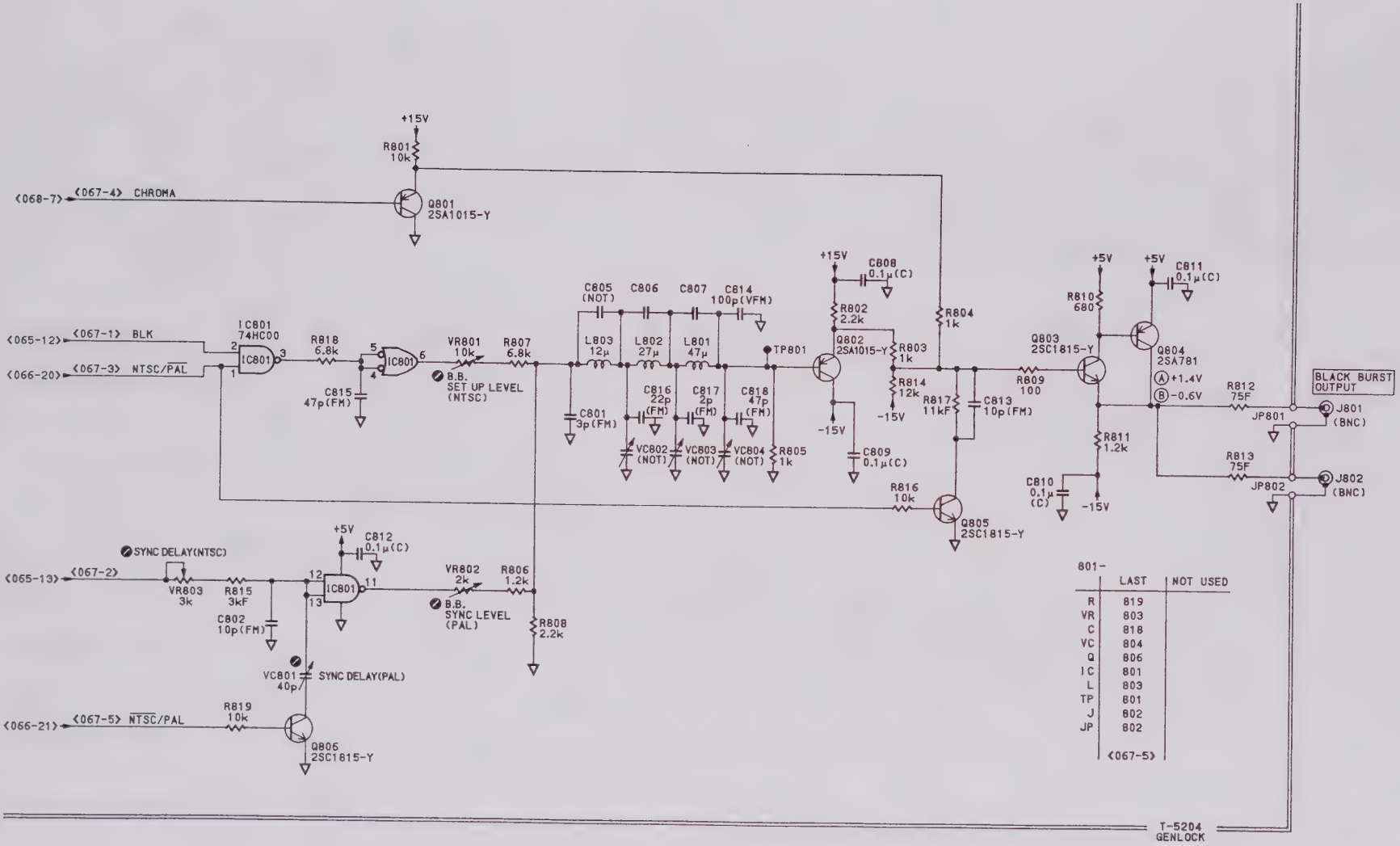
	LAST	NOT USED
R	434	412.417-420
C	421	400.403.411
Q	406	
D	403	
IC	407	404
		9
	<063-12>	

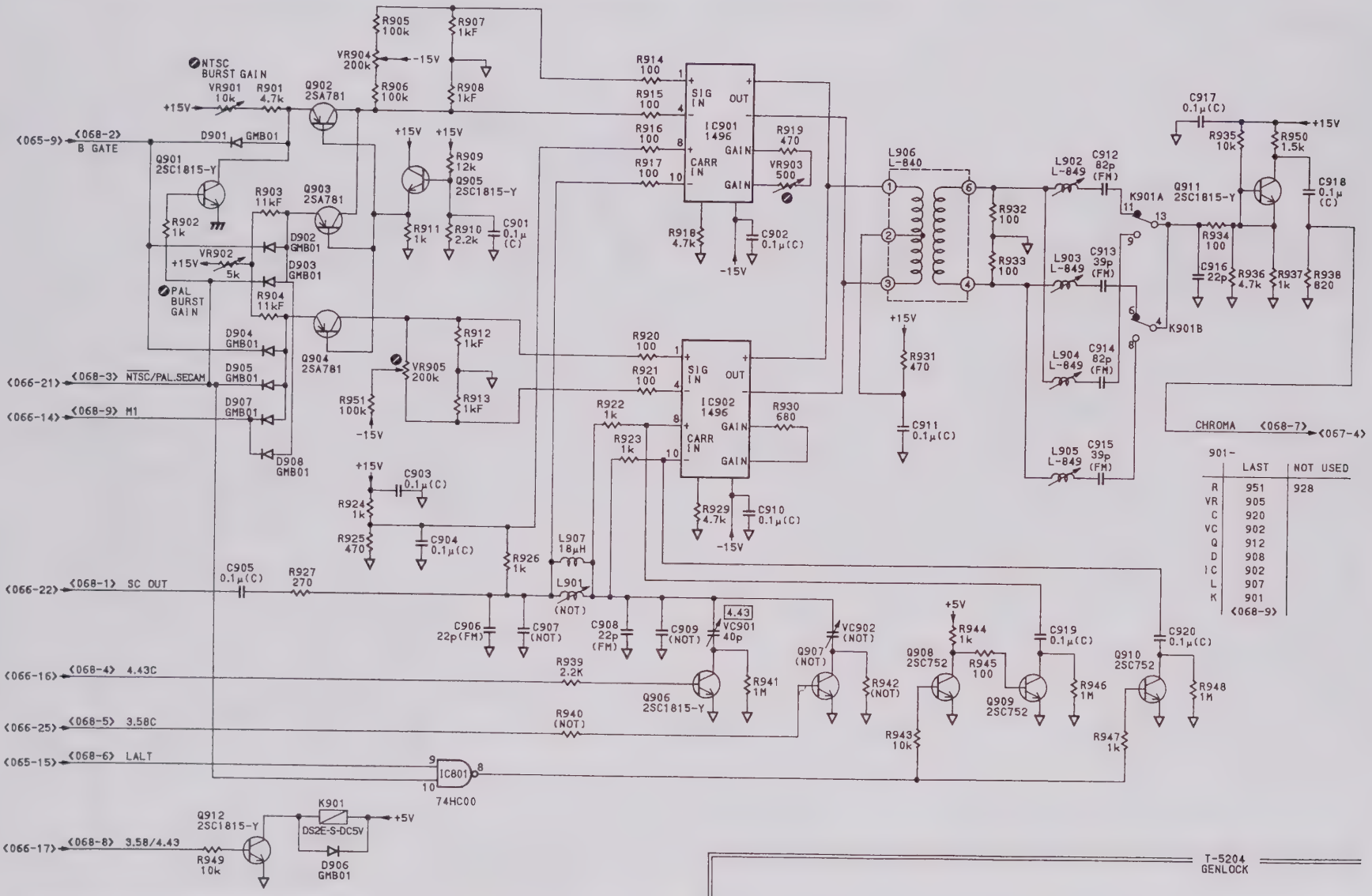

500-
LAST
NOT USED
R 539 533.534
C 525 513
VC 503
Q 513
D 512 505
X 505
TP 504
<064-12>
NTSC
PAL/SECAM
NTSC
PAL
OPTION
OPTION
SYNC CLOCK <064-7> <065-1>
SUBCARRIER <064-8> <065-2>
L:NORMAL
H:PRECISION
VCX0 1
VCX0 2
VCX0 3
VCX0 4
TCXO-46C
TCXO-46C
I-5204
GENLOCK

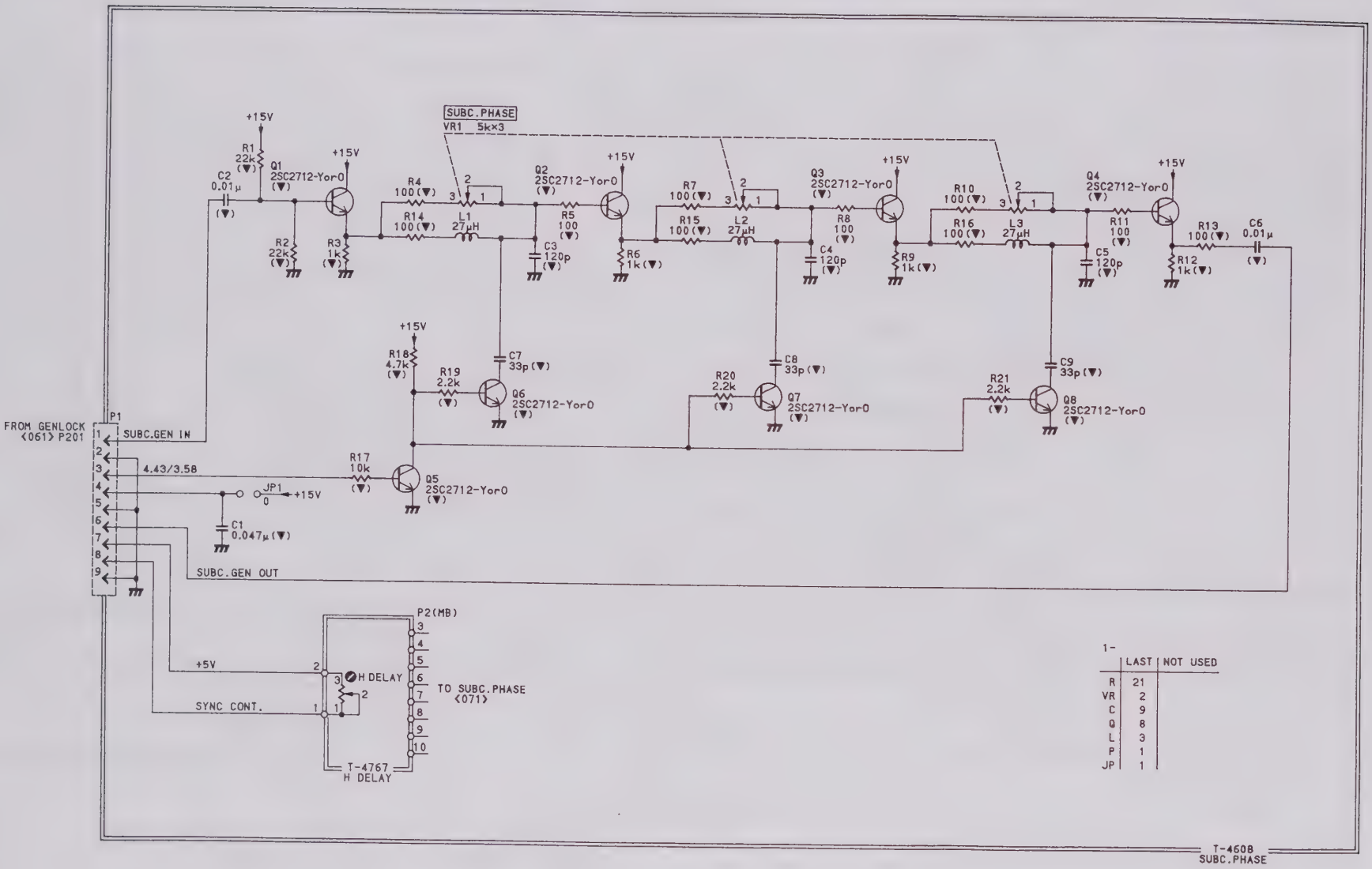


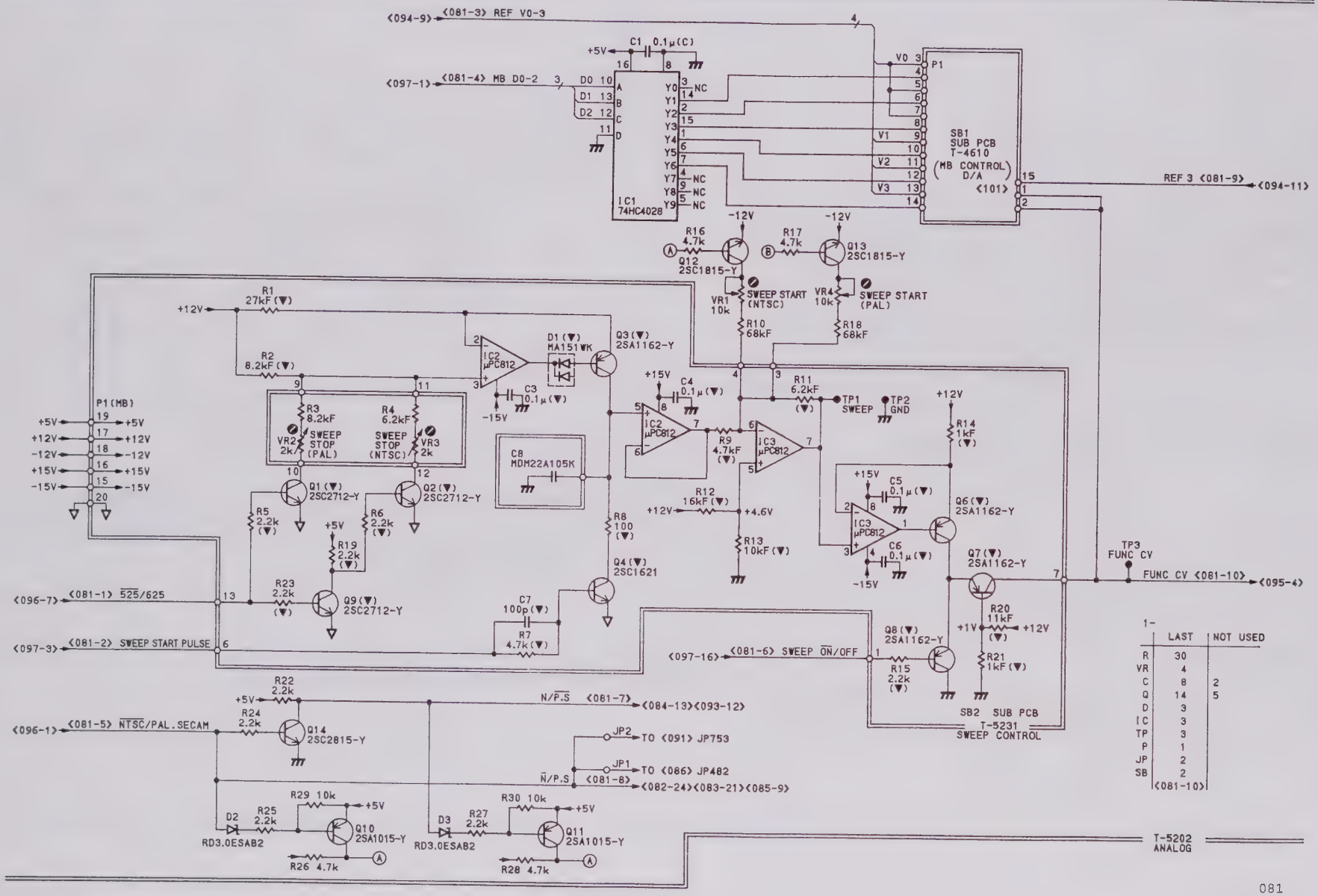
700-	LAST	NOT USED
R	716	
VR	701	700
RA	702	700
C	706	701-703
VC	701	
Q	705	
IC	700	
L	700	
J	701	
P	700	
	(066-20)	2,18,19

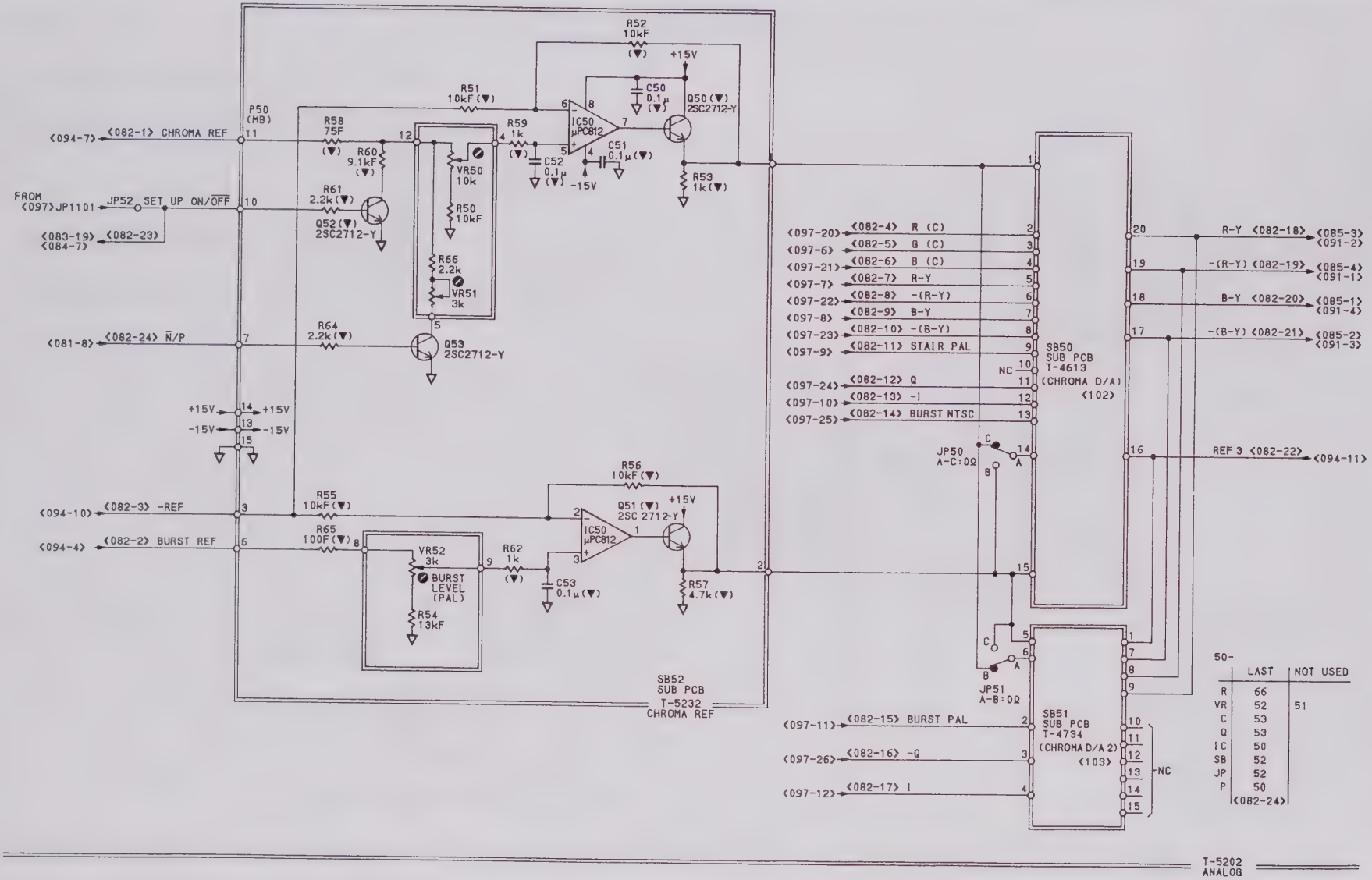
T-5204 GENLOCK

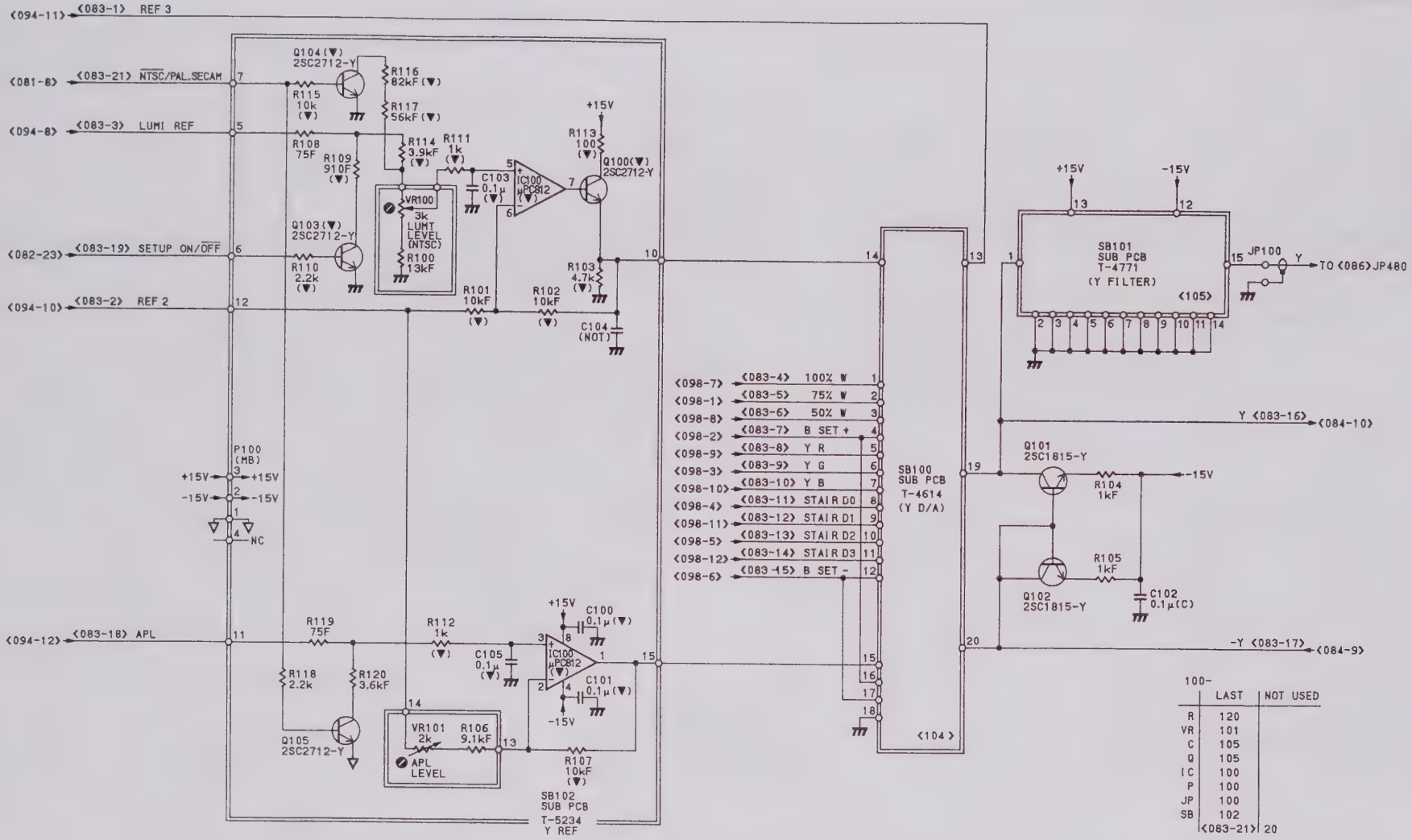

+15V
R801 10k
Q801 2SA1015-Y
(068-7) (067-4) CHROMA
IC801 74HC00
(065-12) (067-1) BLK
(066-20) (067-3) NTSC/PAL
R818 6.8k
C815 47p(FM)
VR801 10k
B.B. SET UP LEVEL (NTSC)
R807 6.8k
C805 (NOT)
C806
C807
C814 100p(VFM)
L803 12μ
L802 27μ
L801 47μ
TP801
C801 3p(FM)
C816 22p (FM)
C817 2p (FM)
C818 47p (FM)
VC802 (NOT)
VC803 (NOT)
VC804 (NOT)
R805 1k
C808 0.1μ(C)
R802 2.2k
Q802 2SA1015-Y
R803 1k
R814 12k
-15V
C809 0.1μ(C)
R804 1k
R817 11kF
C813 10p(FM)
R816 10k
Q805 2SC1815-Y
R809 100
Q803 2SC1815-Y
+5V
R810 680
C811 0.1μ(C)
Q804 2SA781
Ⓐ +1.4V
Ⓑ -0.6V
R811 1.2k
C810 0.1μ (C)
R812 75F
R813 75F
JP801
JP802
BLACK BURST OUTPUT
J801 (BNC)
J802 (BNC)
SYNC DELAY(NTSC)
(065-13) (067-2)
VR803 3k
R815 3kF
C802 10p(FM)
C812 0.1μ(C)
VR802 2k
B.B. SYNC LEVEL (PAL)
R806 1.2k
R808 2.2k
VC801 40p
SYNC DELAY(PAL)
(066-21) (067-5) NTSC/PAL
R819 10k
Q806 2SC1815-Y
801-
LAST NOT USED
R 819
VR 803
C 818
VC 804
Q 806
IC 801
L 803
TP 801
J 802
JP 802
(067-5)
T-5204 GENLOCK

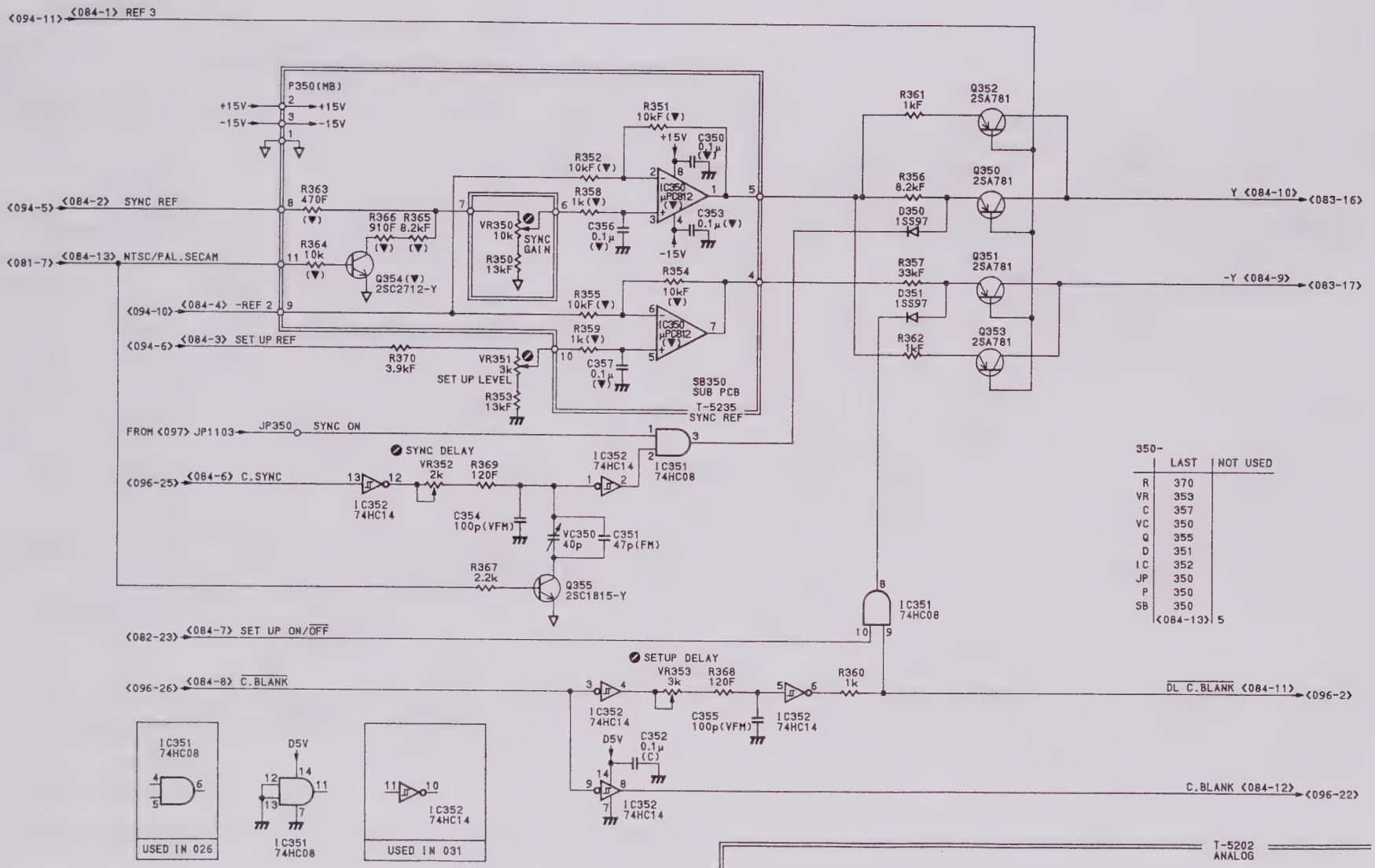

NTSC BURST GAIN
VR901 10k
R901 4.7k
Q902 2SA781
R905 100k
VR904 200k
R906 100k
R907 1kF
R908 1kF
-15V
+15V
<065-9>
<068-2> B GATE
D901 GMB01
Q901 2SC1815-Y
R902 1k
R903 11kF
Q903 2SA781
D902 GMB01
VR902 5k
D903 GMB01
R904 11kF
PAL BURST GAIN
Q904 2SA781
D904 GMB01
D905 GMB01
D907 GMB01
D908 GMB01
<066-21>
<068-3> NTSC/PAL.SECAM
<066-14>
<068-9> M1
R909 12k
Q905 2SC1815-Y
R911 1k
R910 2.2k
C901 0.1μ (C)
VR905 200k
R912 1kF
R913 1kF
R951 100k
C903 0.1μ(C)
R924 1k
R925 470
C904 0.1μ(C)
C905 0.1μ(C)
R927 270
<066-22>
<068-1> SC OUT
R926 1k
L907 18μH
L901 (NOT)
R914 100
R915 100
R916 100
R917 100
IC901 1496
SIG IN
CARR IN
OUT
GAIN
R919 470
VR903 500
R918 4.7k
C902 0.1μ(C)
R920 100
R921 100
IC902 1496
R922 1k
R923 1k
R930 680
R929 4.7k
C910 0.1μ(C)
L906 L-840
R932 100
R933 100
R931 470
C911 0.1μ(C)
L902 L-849
C912 82p (FM)
L903 L-849
C913 39p (FM)
L904 L-849
C914 82p (FM)
L905 L-849
C915 39p (FM)
K901A
K901B
C917 0.1μ(C)
R935 10k
R950 1.5k
Q911 2SC1815-Y
C918 0.1μ (C)
R934 100
C916 22p
R936 4.7k
R937 1k
R938 820
CHROMA <068-7> <067-4>
C906 22p(FM)
C907 (NOT)
C908 22p (FM)
C909 (NOT)
4.43
VC901 40p
VC902 (NOT)
Q907 (NOT)
R942 (NOT)
R939 2.2K
Q906 2SC1815-Y
R941 1M
R940 (NOT)
<066-16>
<068-4> 4.43C
<066-25>
<068-5> 3.58C
<065-15>
<068-6> LALT
IC801
74HC00
+5V
R944 1k
Q908 2SC752
R945 100
Q909 2SC752
R946 1M
R943 10k
C919 0.1μ(C)
C920 0.1μ(C)
Q910 2SC752
R948 1M
R947 1k
K901
DS2E-S-DC5V
D906 GMB01
Q912 2SC1815-Y
R949 10k
<066-17>
<068-8> 3.58/4.43
901-
LAST
NOT USED
R 951 928
VR 905
C 920
VC 902
Q 912
D 908
IC 902
L 907
K 901
<068-9>


SUBC.PHASE
VR1 5k×3
+15V
R1 22k (▼)
C2 0.01μ (▼)
Q1 2SC2712-YorO (▼)
R2 22k (▼)
R3 1k (▼)
R4 100 (▼)
R14 100 (▼)
L1 27μH
C3 120p (▼)
Q2 2SC2712-YorO (▼)
R5 100 (▼)
R6 1k (▼)
R7 100 (▼)
R15 100 (▼)
L2 27μH
C4 120p (▼)
Q3 2SC2712-YorO (▼)
R8 100 (▼)
R9 1k (▼)
R10 100 (▼)
R16 100 (▼)
L3 27μH
C5 120p (▼)
Q4 2SC2712-YorO (▼)
R11 100 (▼)
R12 1k (▼)
R13 100 (▼)
C6 0.01μ (▼)
R18 4.7k (▼)
R19 2.2k (▼)
C7 33p (▼)
Q6 2SC2712-YorO (▼)
R20 2.2k (▼)
C8 33p (▼)
Q7 2SC2712-YorO (▼)
R21 2.2k (▼)
C9 33p (▼)
Q8 2SC2712-YorO (▼)
FROM GENLOCK <061> P201
P1
SUBC.GEN IN
4.43/3.58
JP1
0
R17 10k (▼)
Q5 2SC2712-YorO (▼)
C1 0.047μ (▼)
SUBC.GEN OUT
P2(MB)
+5V
H DELAY
SYNC CONT.
TO SUBC.PHASE <071>
T-4767
H DELAY
1-
LAST | NOT USED
R 21
VR 2
C 9
Q 8
L 3
P 1
JP 1
T-4608
SUBC.PHASE


SB1 SUB PCB T-4610 (MB CONTROL) D/A
SB2 SUB PCB T-5231 SWEEP CONTROL
IC1 74HC4028
SWEEP START (NTSC)
SWEEP START (PAL)
SWEEP STOP (PAL)
SWEEP STOP (NTSC)
SWEEP
GND
FUNC CV
REF 3 <081-9> <094-11>
FUNC CV <081-10> <095-4>
<081-3> REF V0-3
<081-4> MB D0-2
<081-1> 525/625
<081-2> SWEEP START PULSE
<081-5> NTSC/PAL.SECAM
<081-6> SWEEP ON/OFF
<081-7> N/P.S
<081-8> N/P.S
TO <091> JP753
TO <086> JP482
T-5202 ANALOG
LAST NOT USED
R 30
VR 4
C 8 2
Q 14 5
D 3
IC 3
TP 3
P 1
JP 2
SB 2
(081-10)


R52 10kF (▼)
+15V
R51 10kF (▼)
C50 0.1μ (▼)
Q50 (▼) 2SC2712-Y
P50 (MB)
<094-7>
<082-1> CHROMA REF
R58 75F (▼)
R60 9.1kF (▼)
R59 1k (▼)
IC50 μPC812
C52 0.1μ (▼)
C51 0.1μ (▼)
-15V
R53 1k (▼)
VR50 10k
R50 10kF
FROM <097> JP1101
JP52 SET UP ON/OFF
<083-19> <084-7>
<082-23>
R61 2.2k (▼)
Q52 (▼) 2SC2712-Y
R66 2.2k
VR51 3k
<081-8>
<082-24> N/P
R64 2.2k (▼)
Q53 2SC2712-Y
+15V
-15V
R56 10kF (▼)
<094-10>
<082-3> -REF
R55 10kF (▼)
Q51 (▼) 2SC 2712-Y
<094-4>
<082-2> BURST REF
R65 100F (▼)
VR52 3k
BURST LEVEL (PAL)
R54 13kF
R62 1k (▼)
C53 0.1μ (▼)
R57 4.7k (▼)
SB52 SUB PCB T-5232 CHROMA REF
<097-20> <082-4> R (C)
<097-6> <082-5> G (C)
<097-21> <082-6> B (C)
<097-7> <082-7> R-Y
<097-22> <082-8> -(R-Y)
<097-8> <082-9> B-Y
<097-23> <082-10> -(B-Y)
<097-9> <082-11> STAIR PAL
NC
<097-24> <082-12> Q
<097-10> <082-13> -I
<097-25> <082-14> BURST NTSC
SB50 SUB PCB T-4613 (CHROMA D/A) <102>
JP50 A-C:0Ω
R-Y <082-18> <085-3> <091-2>
-(R-Y) <082-19> <085-4> <091-1>
B-Y <082-20> <085-1> <091-4>
-(B-Y) <082-21> <085-2> <091-3>
REF 3 <082-22> <094-11>
JP51 A-B:0Ω
<097-11> <082-15> BURST PAL
<097-26> <082-16> -Q
<097-12> <082-17> I
SB51 SUB PCB T-4734 (CHROMA D/A 2) <103>
NC
50-
LAST
NOT USED
R 66
VR 52
C 53
Q 53
IC 50
SB 52
JP 52
P 50
51
<082-24>

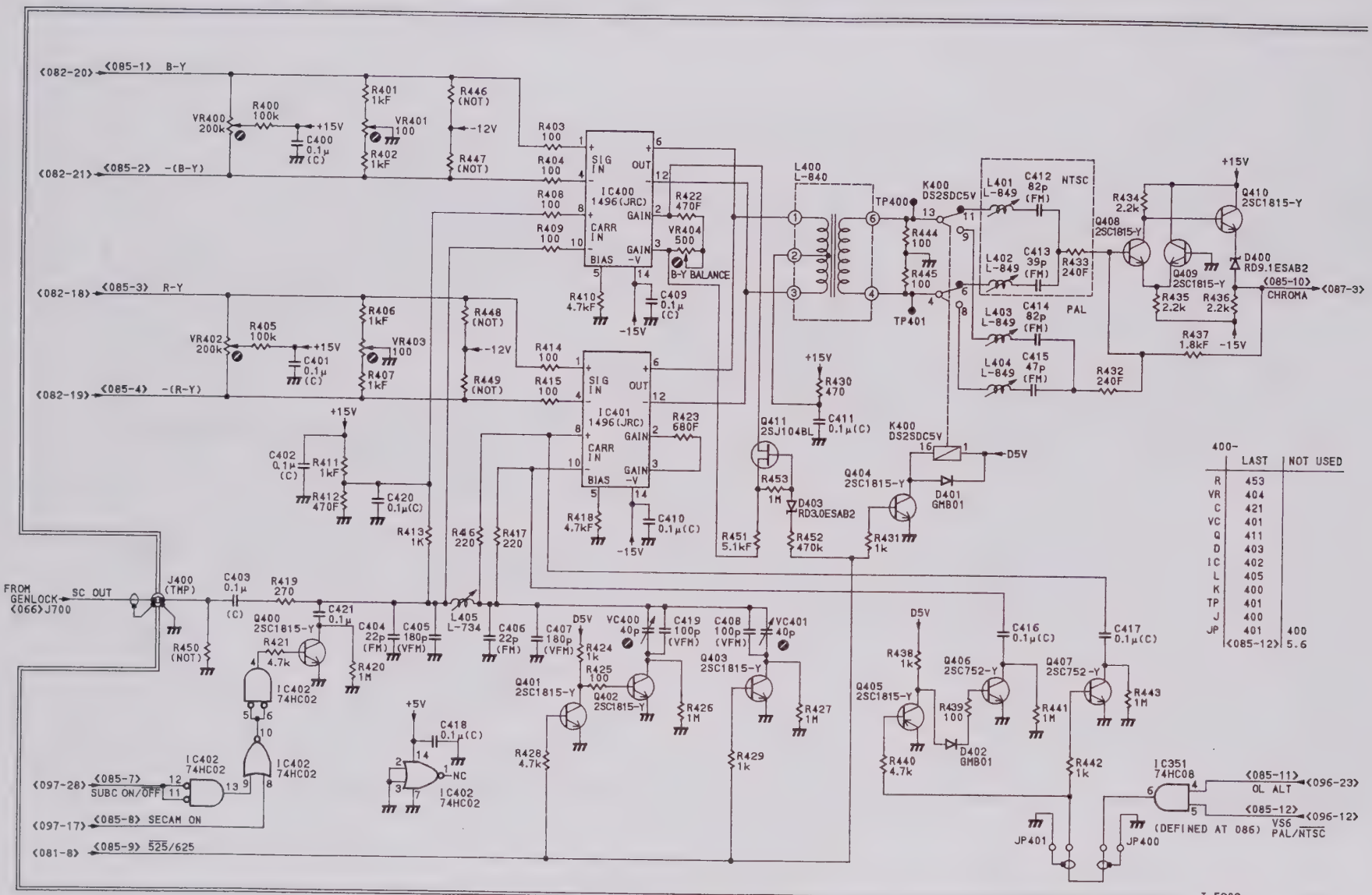

SB102
SUB PCB
T-5234
Y REF
SB100
SUB PCB
T-4614
(Y D/A)
SB101
SUB PCB
T-4771
(Y FILTER)
P100
(MB)
VR100
3k
LUMI
LEVEL
(NTSC)
VR101
2k
APL
LEVEL
100-
LAST
NOT USED
R 120
VR 101
C 105
Q 105
IC 100
P 100
JP 100
SB 102
⟨083-21⟩ 20



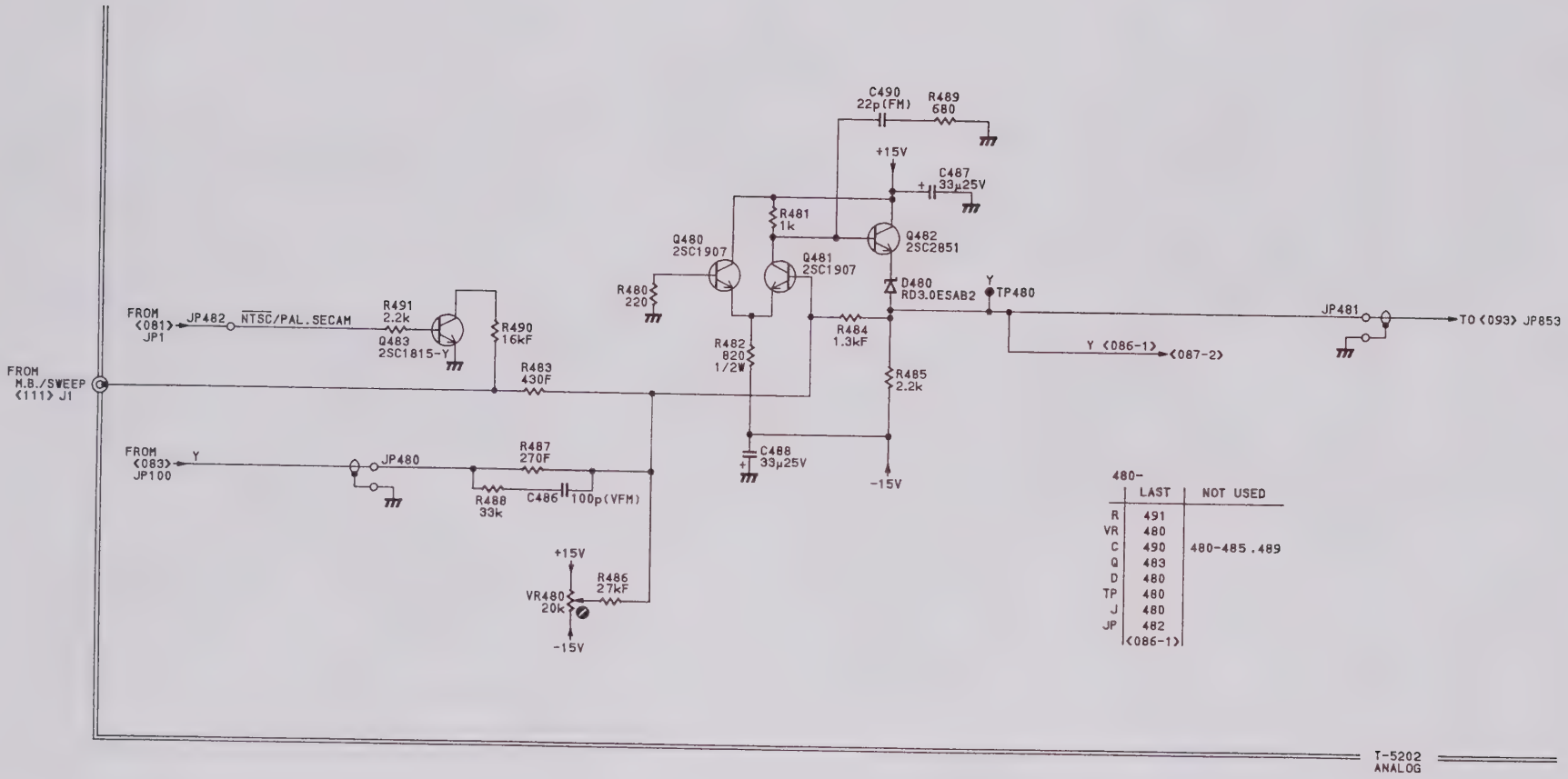
<094-11> <084-1> REF 3
<094-5> <084-2> SYNC REF
<081-7> <084-13> NTSC/PAL.SECAM
<094-10> <084-4> -REF 2
<094-6> <084-3> SET UP REF
FROM <097> JP1103
<096-25> <084-6> C.SYNC
<082-23> <084-7> SET UP ON/OFF
<096-26> <084-8> C.BLANK
Y <084-10> <083-16>
-Y <084-9> <083-17>
DL C.BLANK <084-11> <096-2>
C.BLANK <084-12> <096-22>

350-

	LAST	NOT USED
R	370	
VR	353	
C	357	
VC	350	
Q	355	
D	351	
IC	352	
JP	350	
P	350	
SB	350	
	<084-13>	5

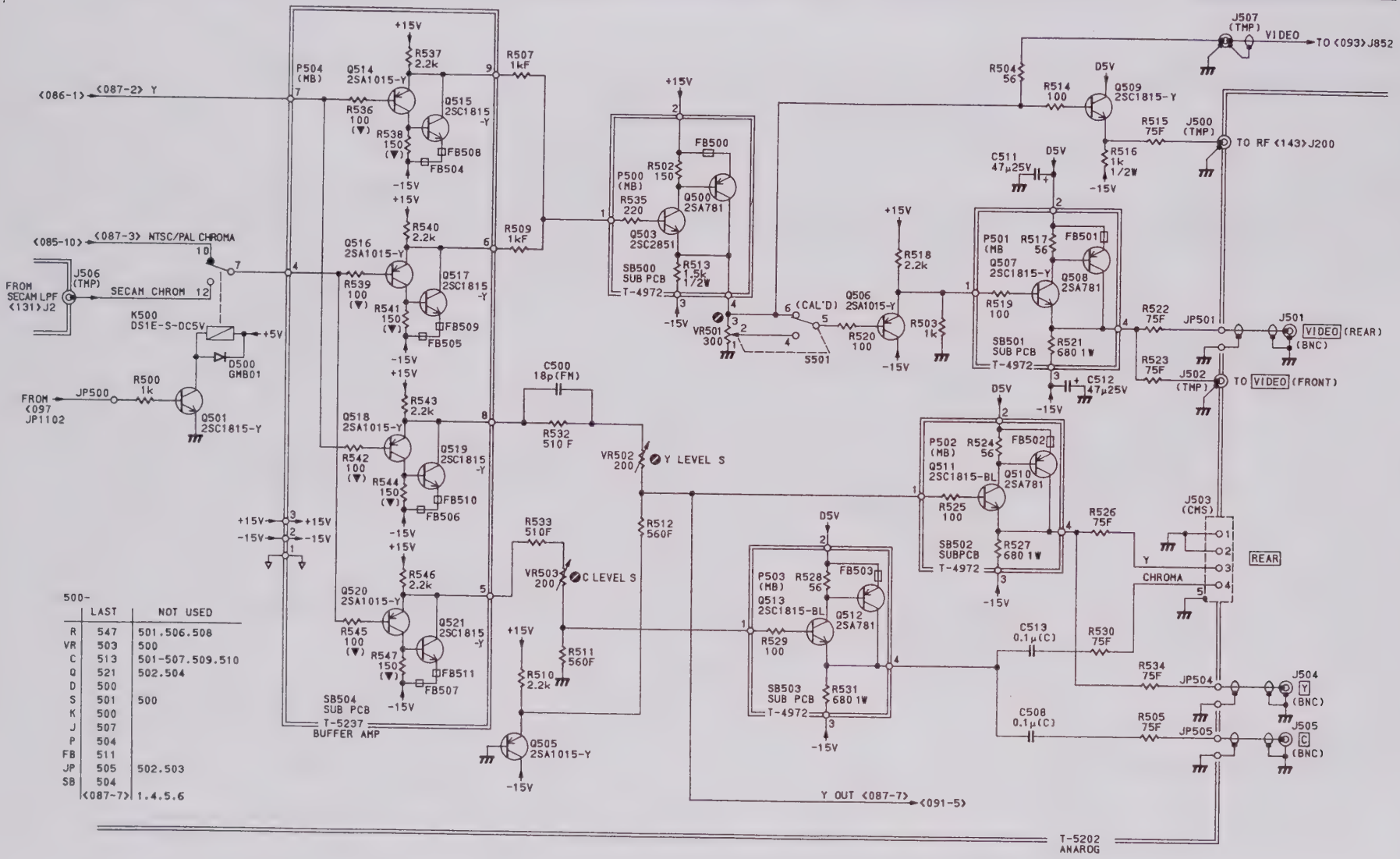


T-5202
ANALOG



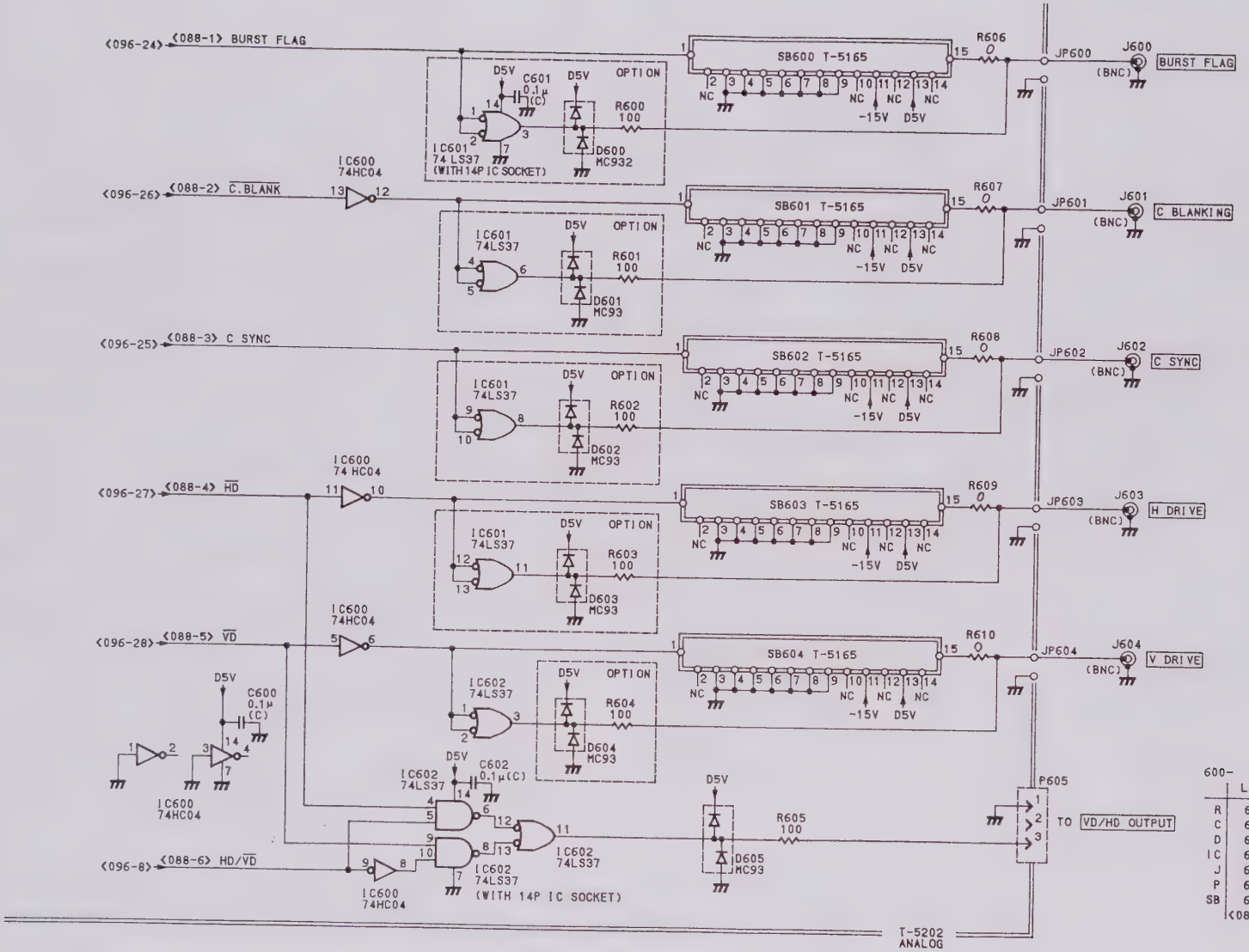
480-

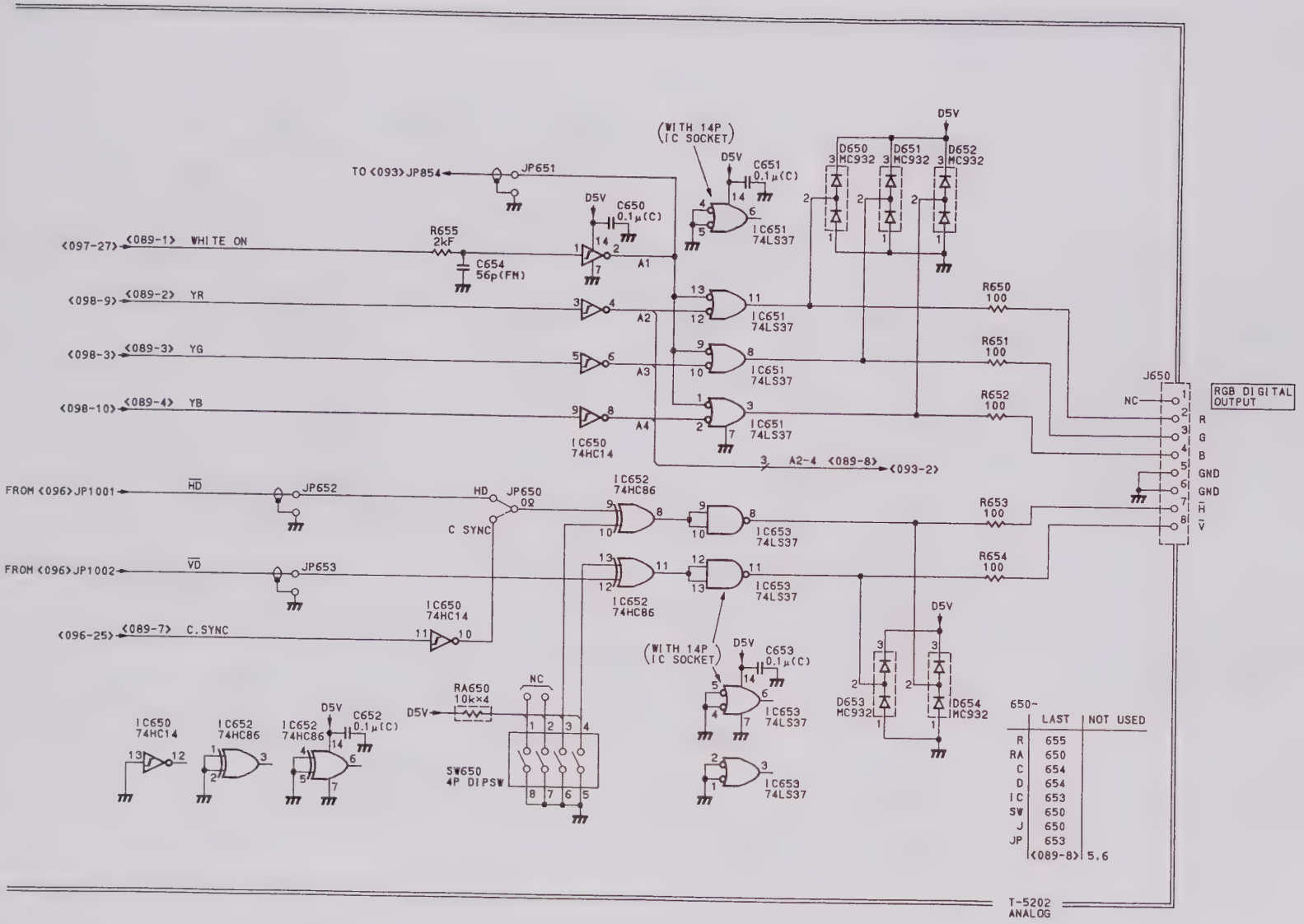
	LAST	NOT USED
R	491	
VR	480	
C	490	480-485 ,489
Q	483	
D	480	
TP	480	
J	480	
JP	482	
	⟨086-1⟩	

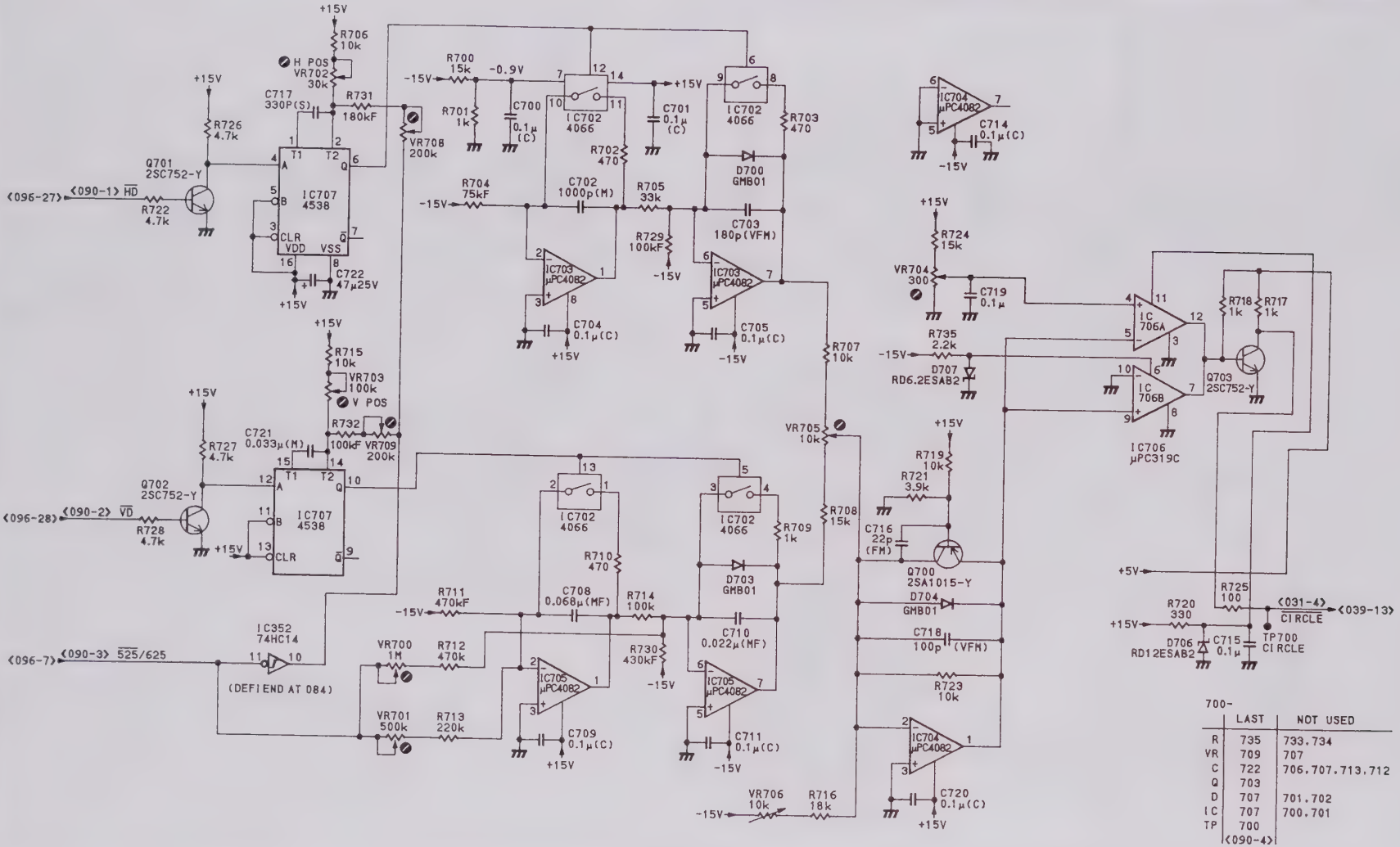


500-

	LAST	NOT USED
R	547	501.506.508
VR	503	500
C	513	501-507.509.510
Q	521	502.504
D	500	
S	501	500
K	500	
J	507	
P	504	
FB	511	
JP	505	502.503
SB	504	
	<087-7>	1.4.5.6

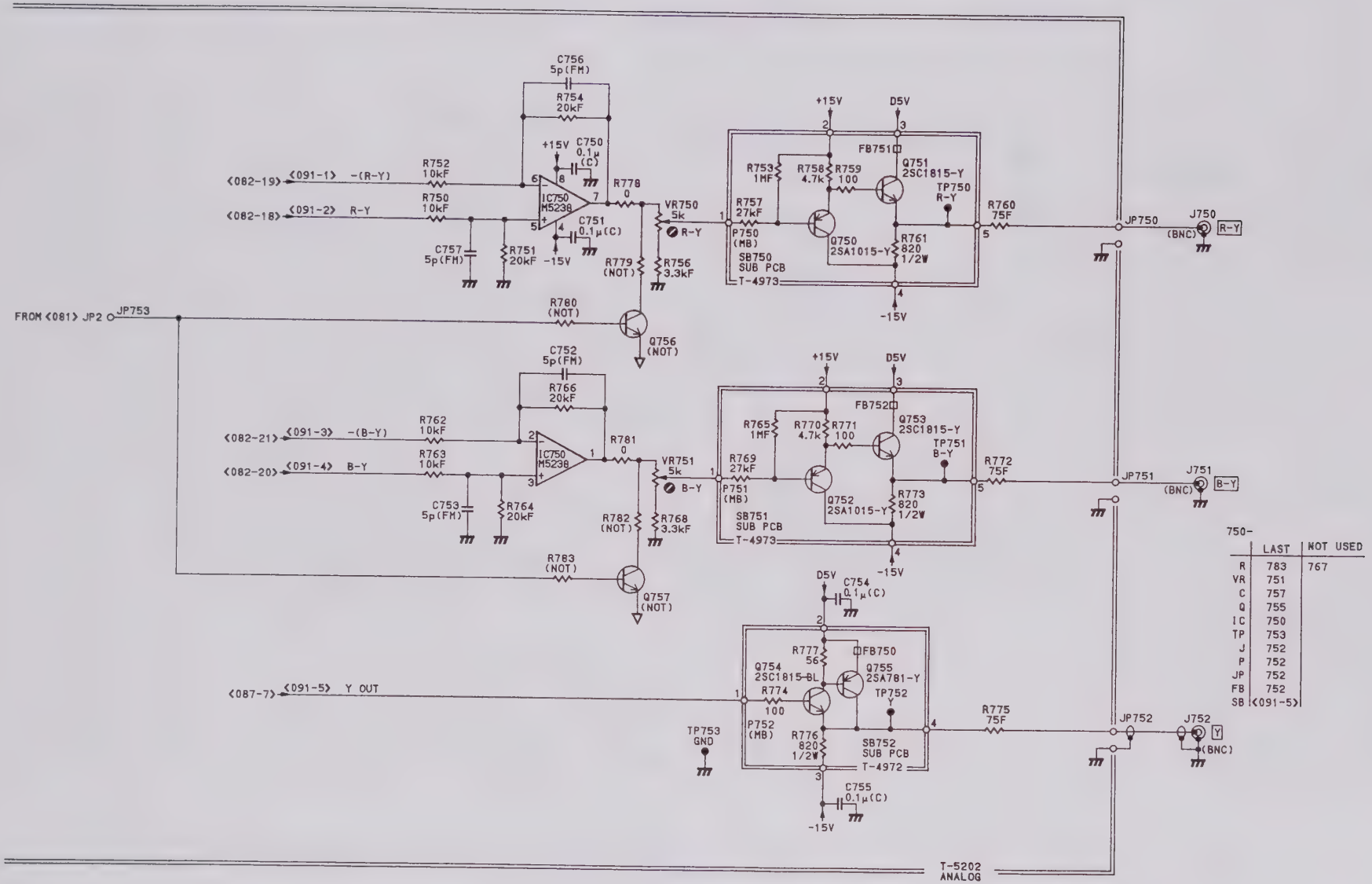

(096-24) (088-1) BURST FLAG
(096-26) (088-2) C.BLANK
(096-25) (088-3) C SYNC
(096-27) (088-4) HD
(096-28) (088-5) VD
(096-8) (088-6) HD/VD
IC600 74HC04
IC601 74LS37 (WITH 14P IC SOCKET)
IC602 74LS37 (WITH 14P IC SOCKET)
D5V
C601 0.1μ (C)
C602 0.1μ(C)
C600 0.1μ (C)
OPTION
R600 100
R601 100
R602 100
R603 100
R604 100
R605 100
D600 MC932
D601 MC93
D602 MC93
D603 MC93
D604 MC93
D605 MC93
SB600 T-5165
SB601 T-5165
SB602 T-5165
SB603 T-5165
SB604 T-5165
NC
-15V
R606 0
R607 0
R608 0
R609 0
R610 0
JP600
JP601
JP602
JP603
JP604
J600 (BNC) BURST FLAG
J601 (BNC) C BLANKING
J602 (BNC) C SYNC
J603 (BNC) H DRIVE
J604 (BNC) V DRIVE
P605
TO VD/HD OUTPUT
T-5202 ANALOG
600-
LAST
NOT USED
R 610
C 602
D 605
IC 602
J 604
P 605
SB 604
600-604
(088-6)


TO <093>JP854
JP651
(WITH 14P IC SOCKET)
D5V
C651 0.1μ(C)
IC651 74LS37
D650 MC932
D651 MC932
D652 MC932
C650 0.1μ(C)
R655 2kF
C654 56p(FM)
<097-27> <089-1> WHITE ON
<098-9> <089-2> YR
<098-3> <089-3> YG
<098-10> <089-4> YB
A1
A2
A3
A4
IC650 74HC14
R650 100
R651 100
R652 100
J650
NC
R
G
B
GND
GND
H
V
RGB DIGITAL OUTPUT
A2-4 <089-8> <093-2>
FROM <096>JP1001
HD
JP652
JP650
C SYNC
IC652 74HC86
IC653 74LS37
R653 100
FROM <096>JP1002
VD
JP653
R654 100
<096-25> <089-7> C.SYNC
D653 MC932
D654 MC932
RA650 10k×4
NC
SW650 4P DIPSW
C652 0.1μ(C)
C653 0.1μ(C)
650-
LAST
NOT USED
R 655
RA 650
C 654
D 654
IC 653
SW 650
J 650
JP 653
<089-8> 5,6
T-5202 ANALOG



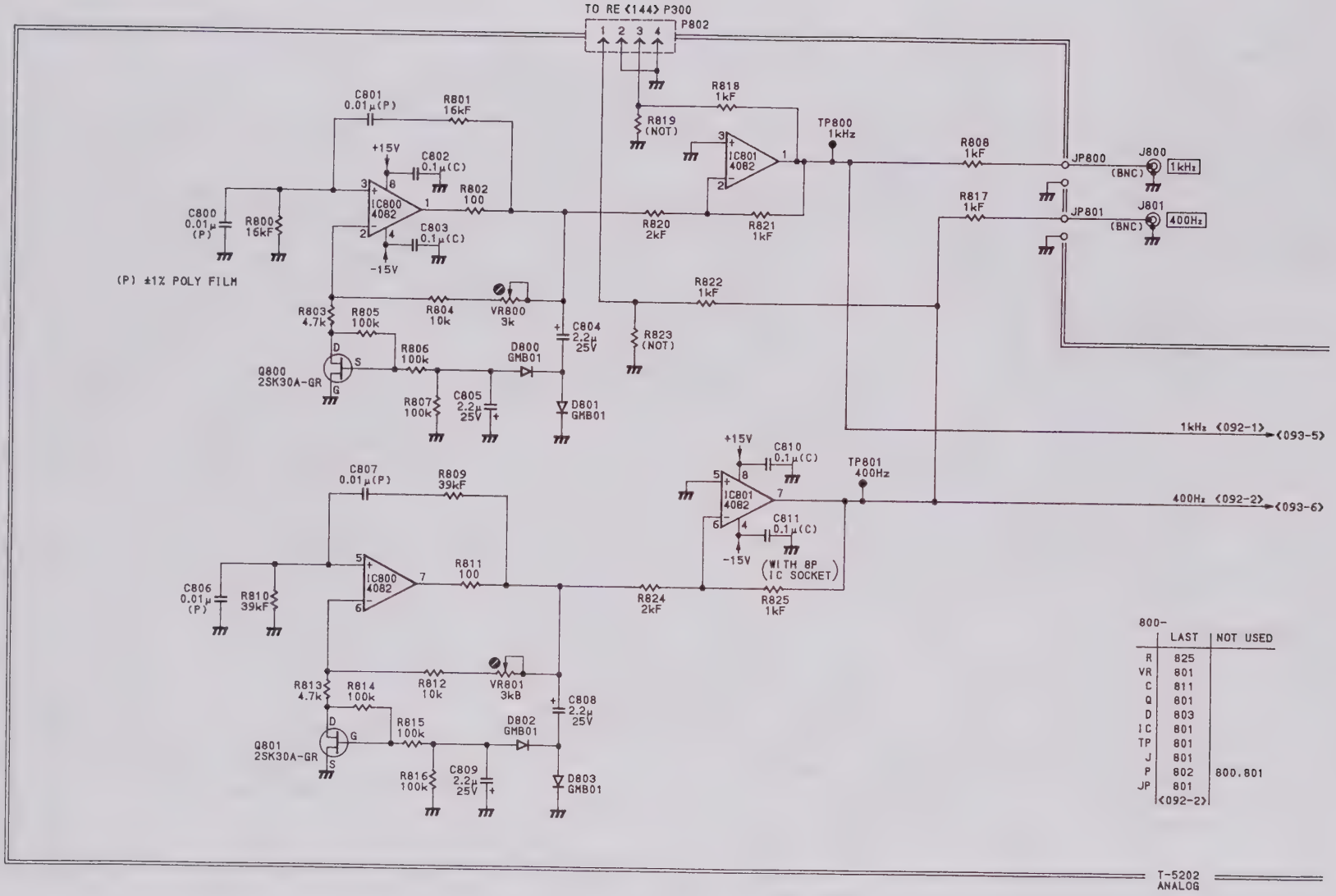
700-

	LAST	NOT USED
R	735	733.734
VR	709	707
C	722	706.707.713.712
Q	703	
D	707	701.702
IC	707	700.701
TP	700	
	<090-4>	



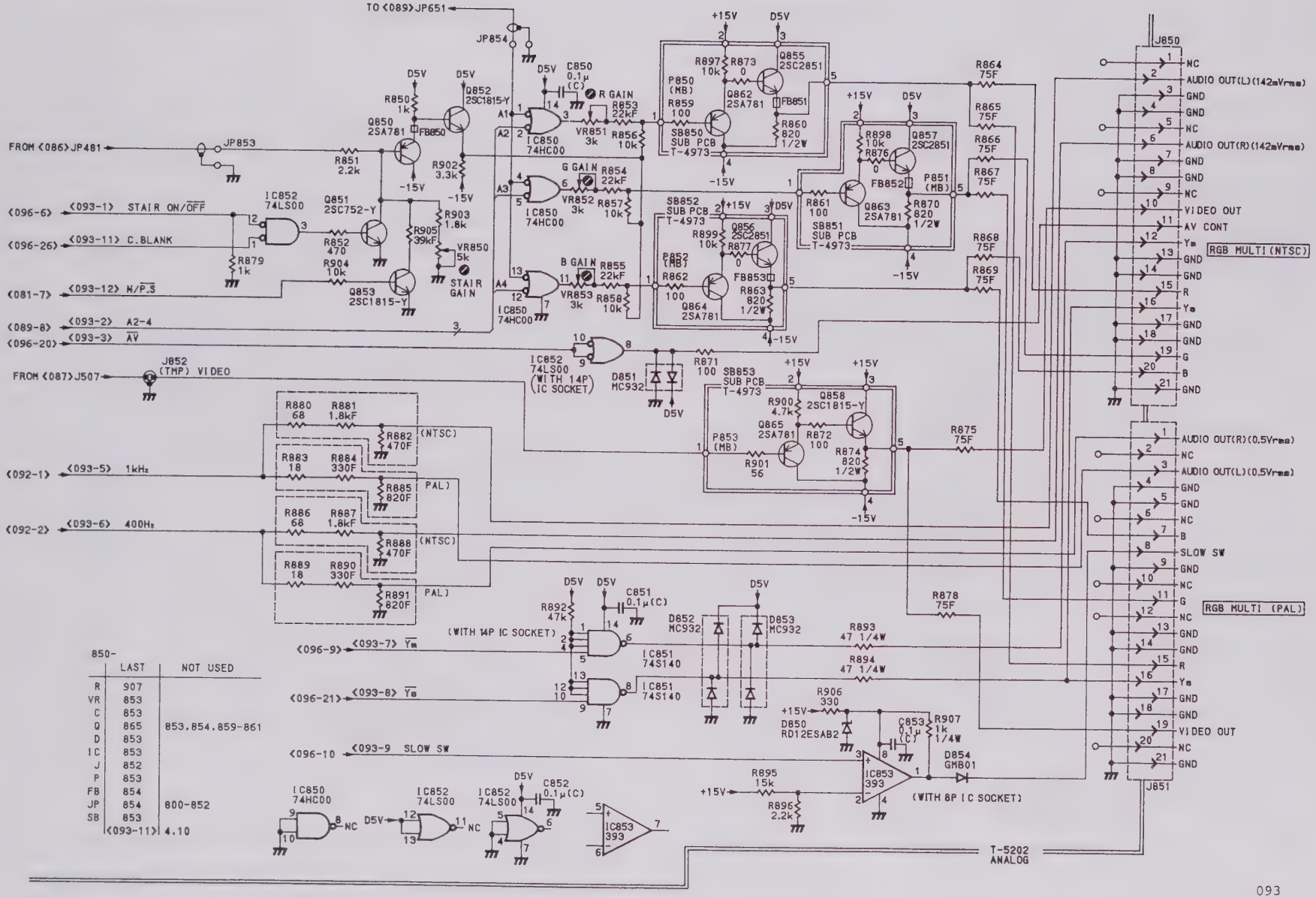
750-

	LAST	NOT USED
R	783	767
VR	751	
C	757	
Q	755	
IC	750	
TP	753	
J	752	
P	752	
JP	752	
FB	752	
SB	<091-5>	



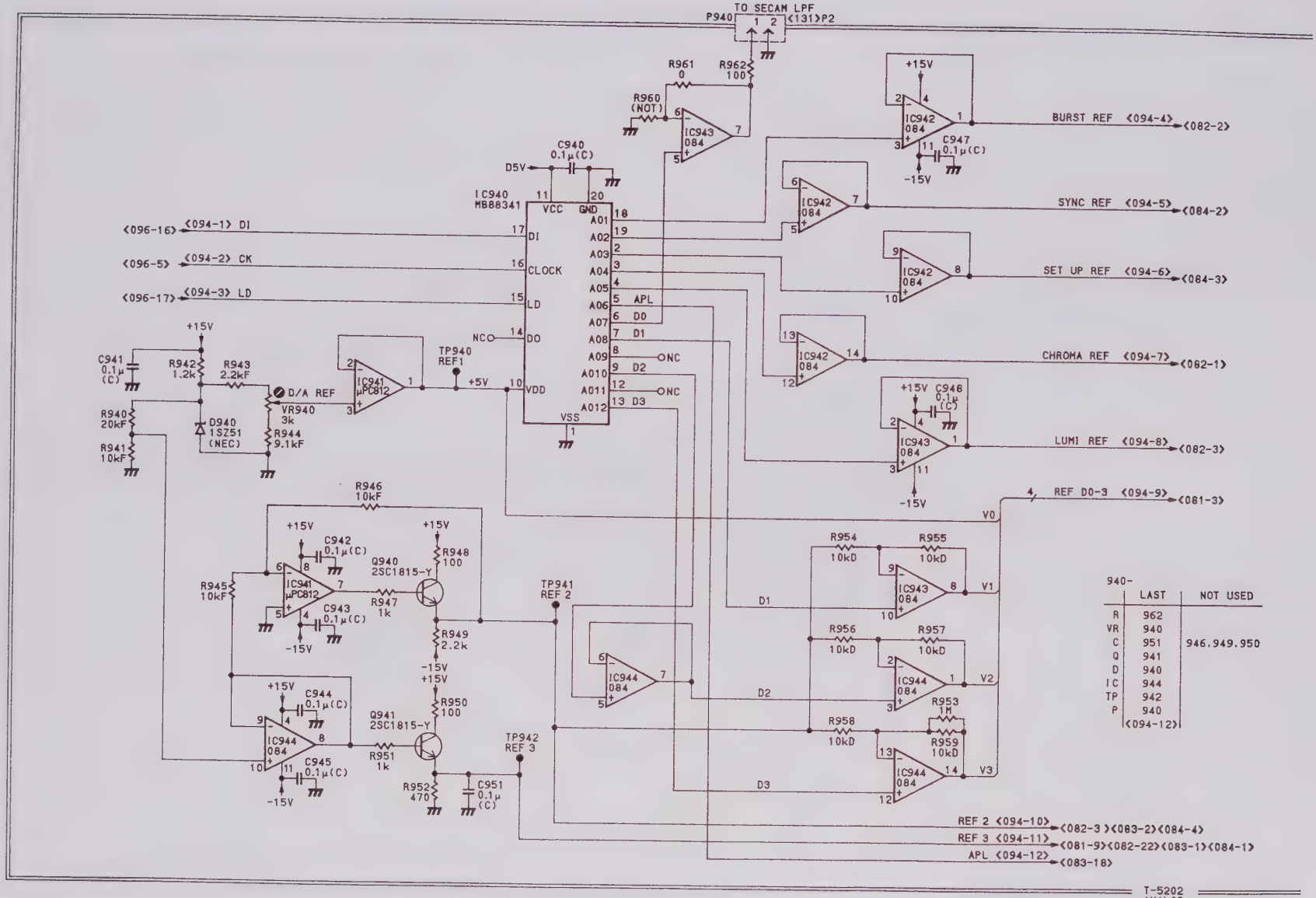
800-

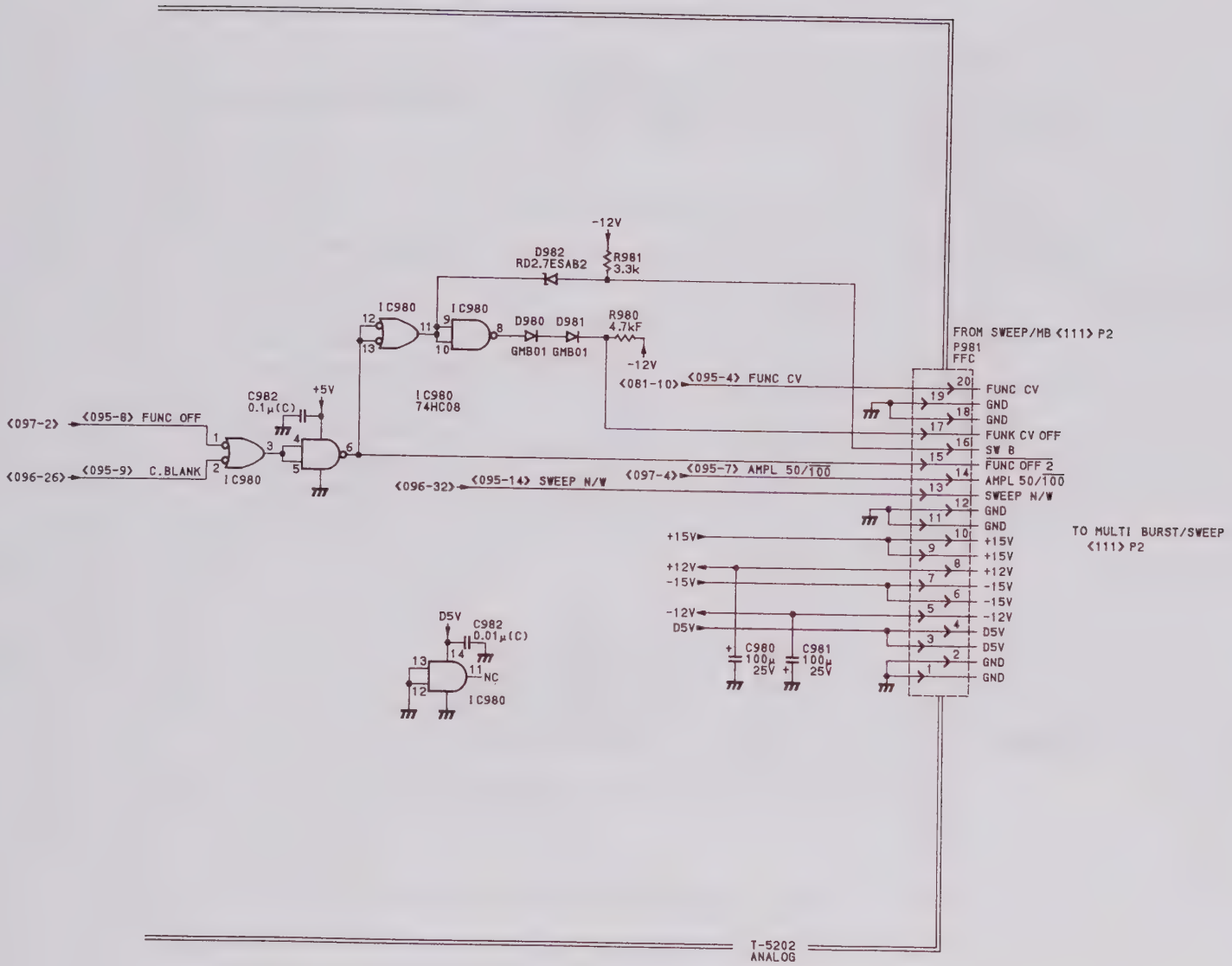
	LAST	NOT USED
R	825	
VR	801	
C	811	
Q	801	
D	803	
IC	801	
TP	801	
J	801	
P	802	800,801
JP	801	
	<092-2>	



850-

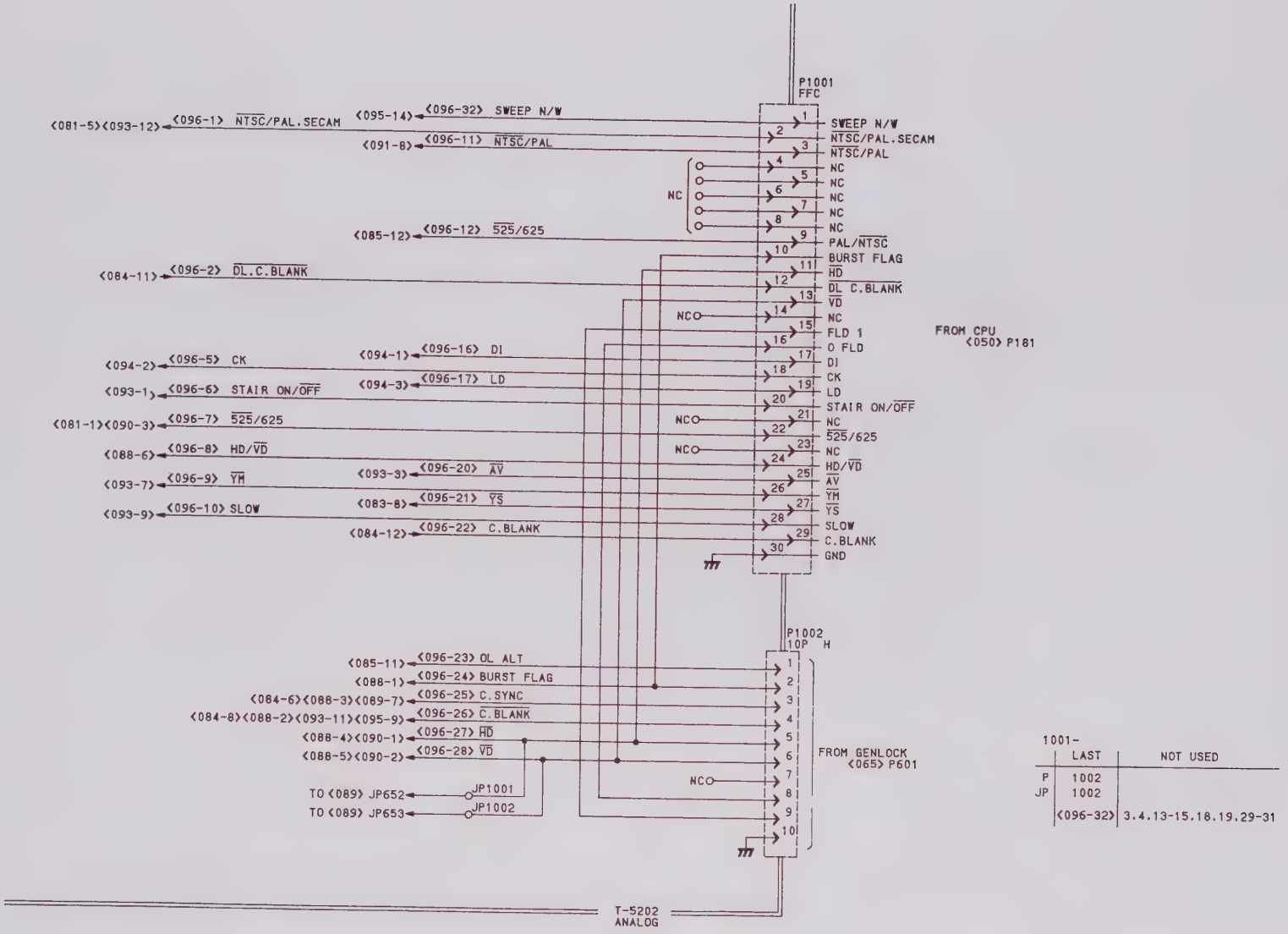
	LAST	NOT USED
R	907	
VR	853	
C	853	
Q	865	853, 854, 859-861
D	853	
IC	853	
J	852	
P	853	
FB	854	
JP	854	800-852
SB	853	
	<093-11> 4.10	


TO SECAM LPF
P940
1 2
<131>P2
R961
0
R962
100
R960
(NOT)
IC943
084
IC942
084
+15V
-15V
C947
0.1μ(C)
BURST REF <094-4><082-2>
SYNC REF <094-5><084-2>
SET UP REF <094-6><084-3>
CHROMA REF <094-7><082-1>
LUMI REF <094-8><082-3>
REF DO-3 <094-9><081-3>
C940
0.1μ(C)
D5V
IC940
MB88341
VCC
GND
DI
CLOCK
LD
DO
VDD
VSS
A01
A02
A03
A04
A05
A06
A07
A08
A09
A010
A011
A012
APL
D0
D1
D2
D3
NC
<096-16><094-1> DI
<096-5><094-2> CK
<096-17><094-3> LD
C941
0.1μ
(C)
R942
1.2k
R943
2.2kF
R940
20kF
R941
10kF
D940
1SZ51
(NEC)
D/A REF
VR940
3k
R944
9.1kF
IC941
μPC812
TP940
REF1
+5V
R946
10kF
C942
0.1μ(C)
Q940
2SC1815-Y
R948
100
R945
10kF
R947
1k
C943
0.1μ(C)
R949
2.2k
TP941
REF 2
C944
0.1μ(C)
Q941
2SC1815-Y
R950
100
R951
1k
C945
0.1μ(C)
TP942
REF 3
R952
470
C951
0.1μ
(C)
R954
10kD
R955
10kD
R956
10kD
R957
10kD
R958
10kD
R953
1M
R959
10kD
V0
V1
V2
V3
D1
D2
D3
940-
LAST
NOT USED
R 962
VR 940
C 951
946,949,950
Q 941
D 940
IC 944
TP 942
P 940
<094-12>
REF 2 <094-10><082-3><083-2><084-4>
REF 3 <094-11><081-9><082-22><083-1><084-1>
APL <094-12><083-18>
T-5202
ANALOG

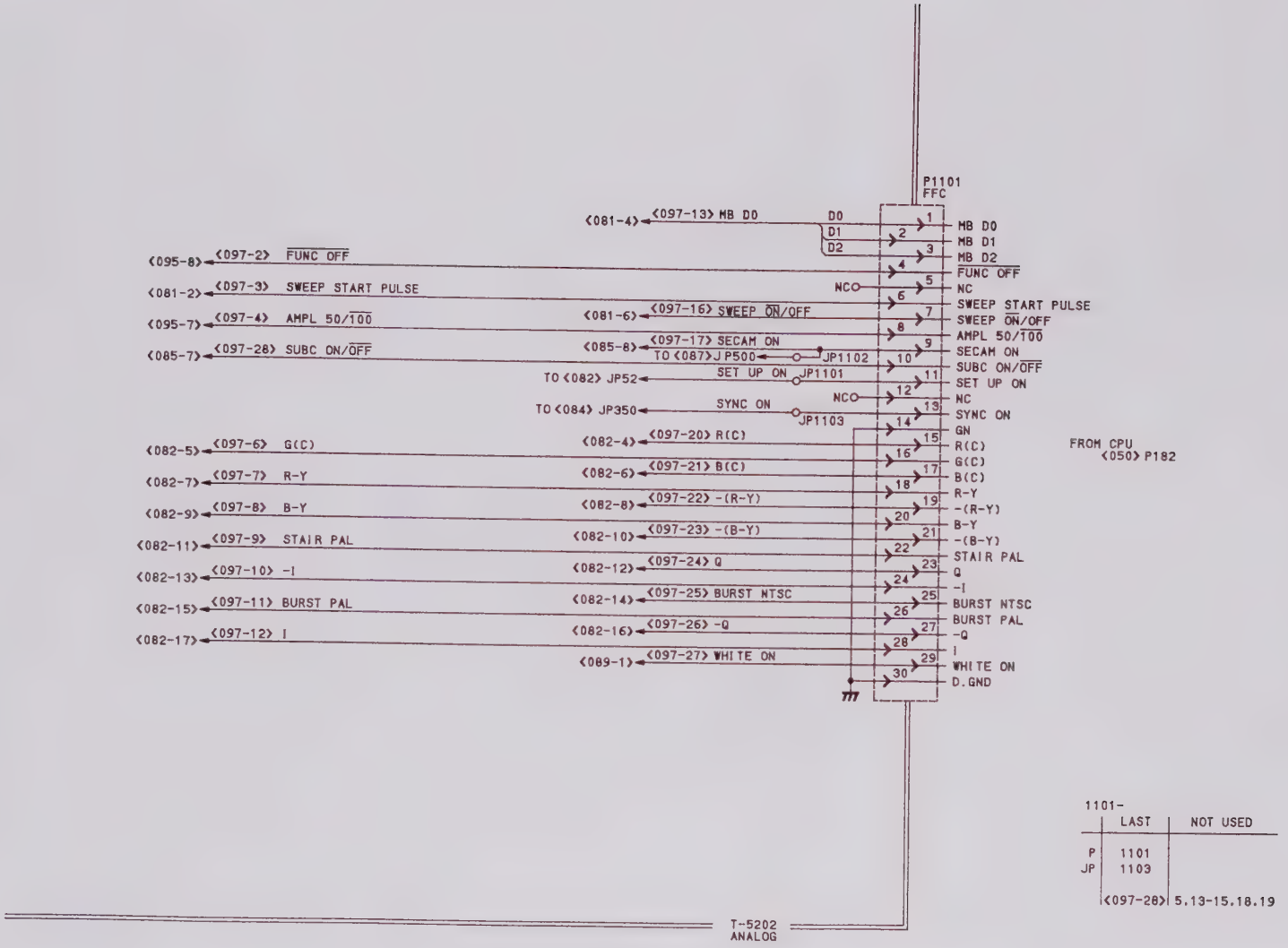


980-

	LAST	NOT USED
R	981	
C	982	
D	982	
IC	980	
P	981	
	<095-14>	1-3,5,6,10-13

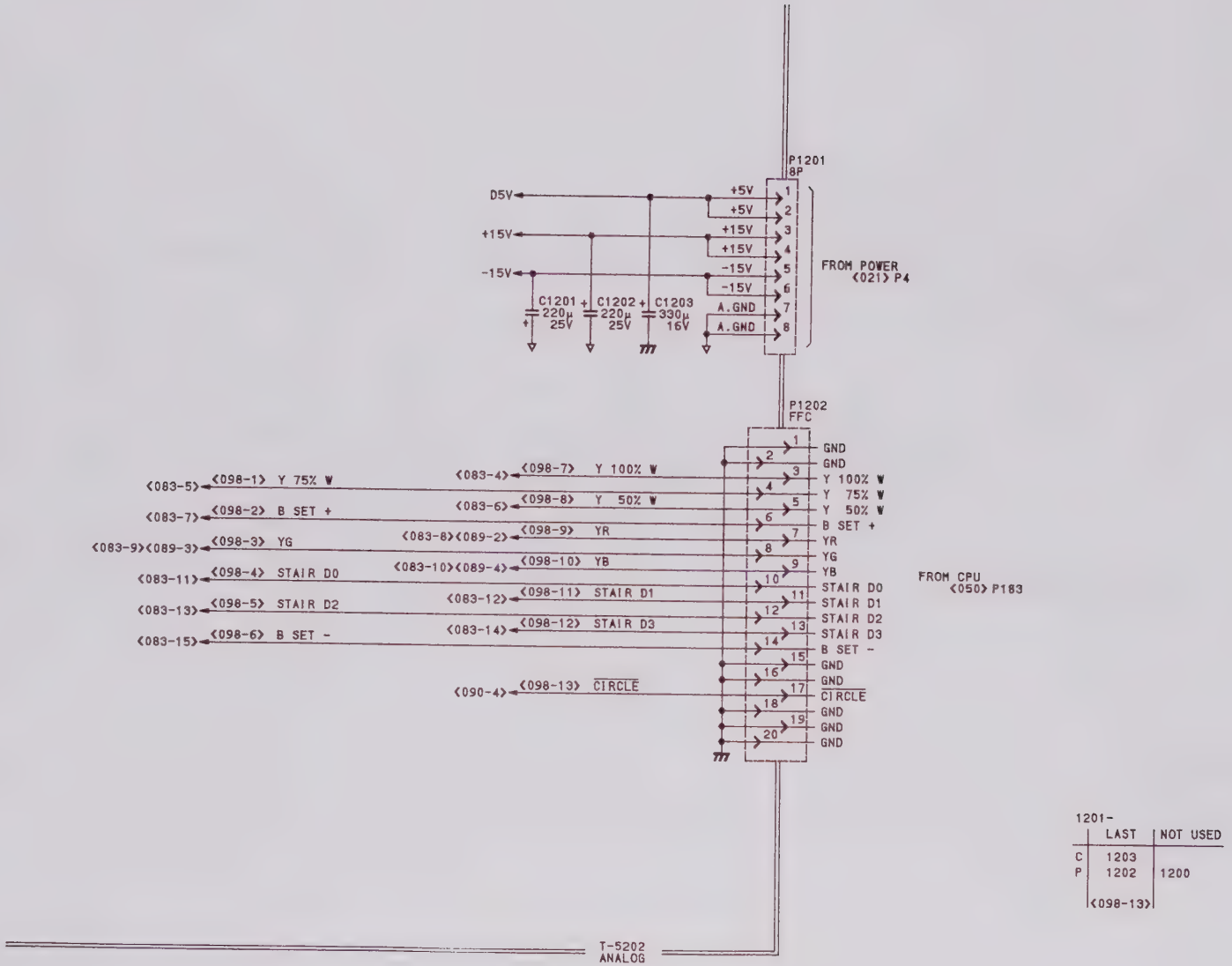


1001-	LAST	NOT USED
P	1002	
JP	1002	
	<096-32>	3.4.13-15.18.19.29-31



1101-

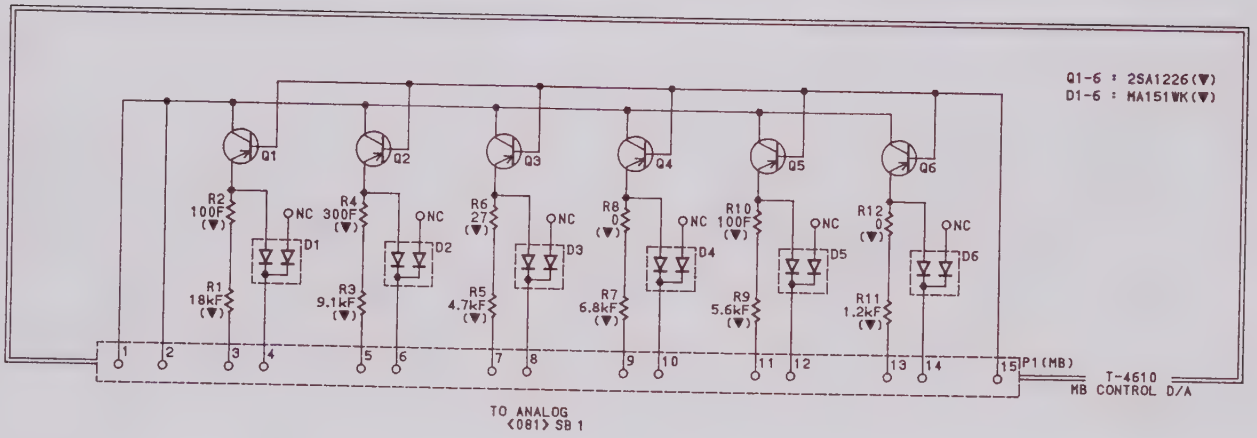
	LAST	NOT USED
P	1101	
JP	1103	
	<097-28>	5,13-15,18,19



1201-

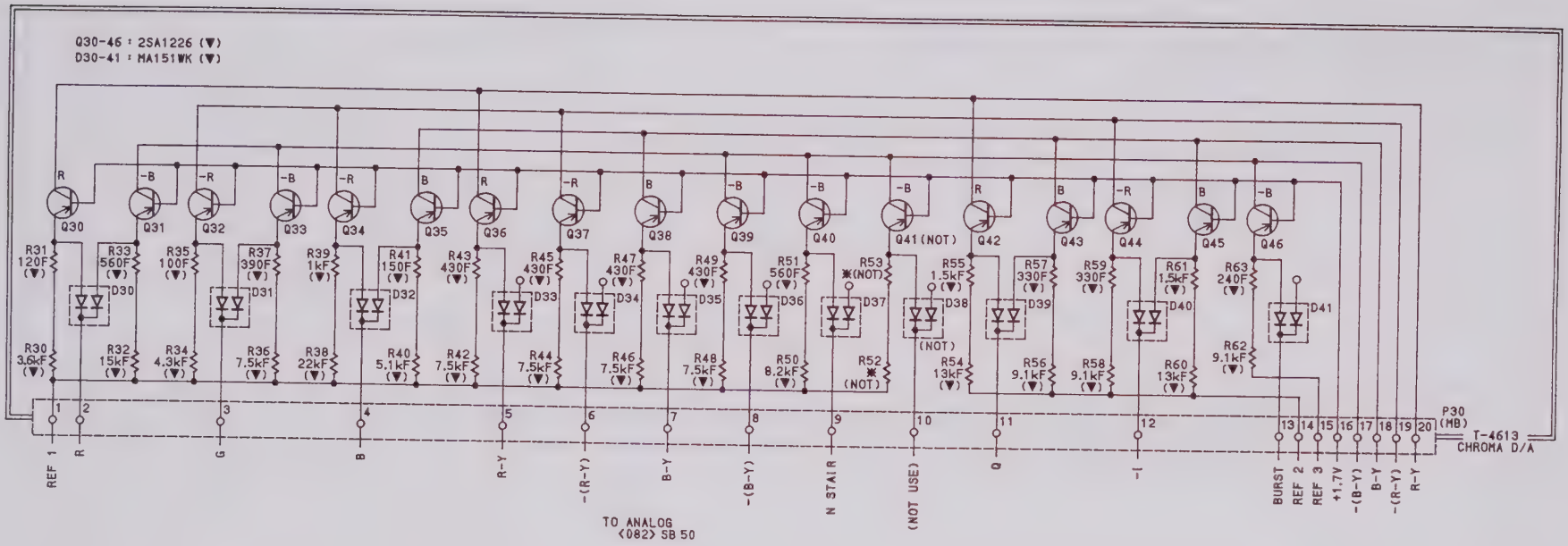
	LAST	NOT USED
C	1203	
P	1202	1200

(098-13)



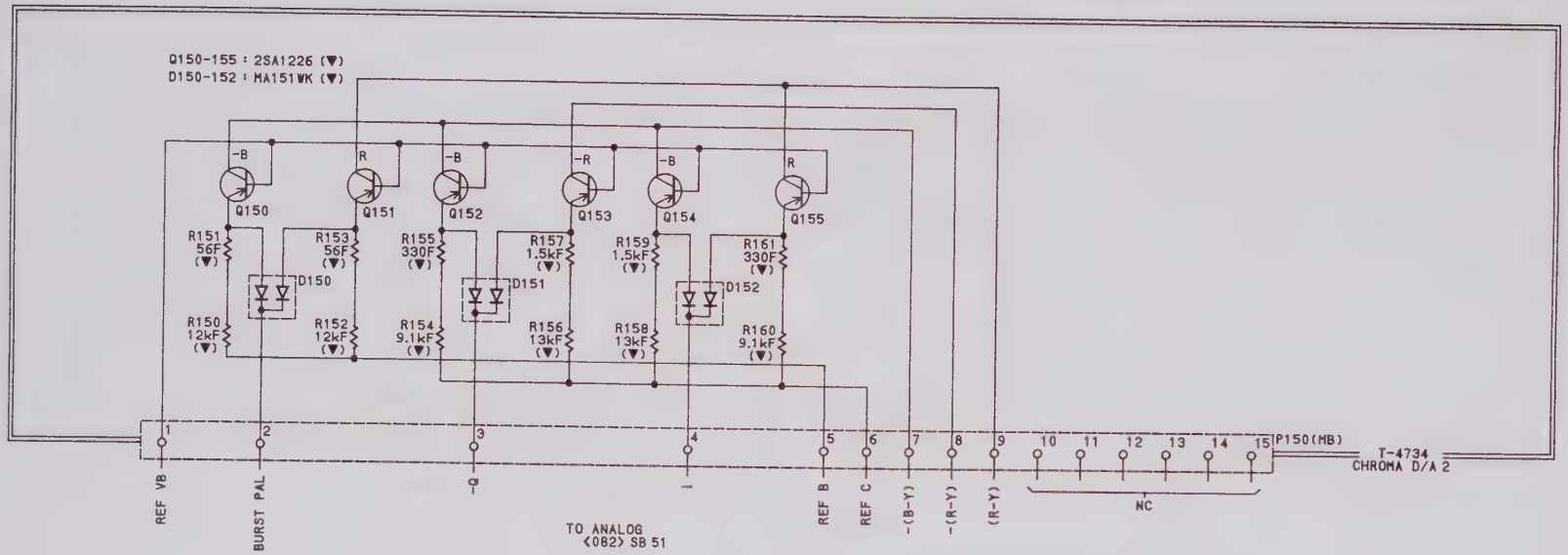
1-

	LAST	NOT USED
R	12	
Q	6	
D	6	
P	1	

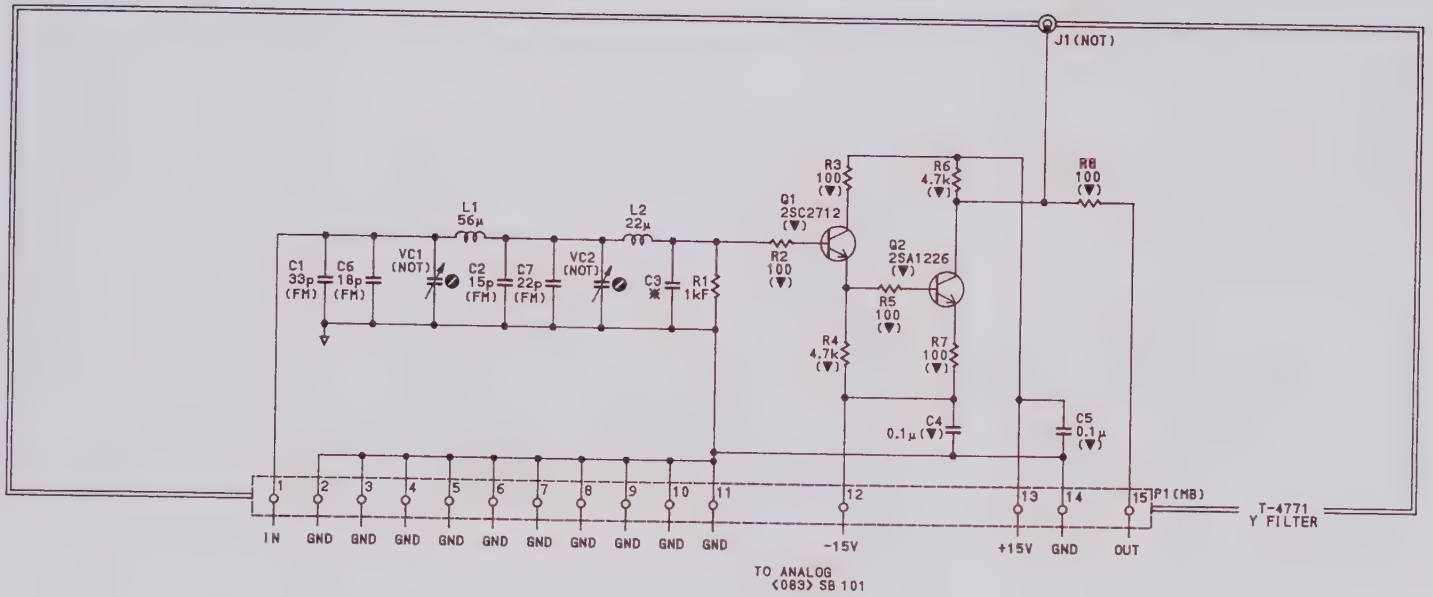


30-

	LAST	NOT USED
R	63	
Q	46	
D	41	
P	30	
JP	20	

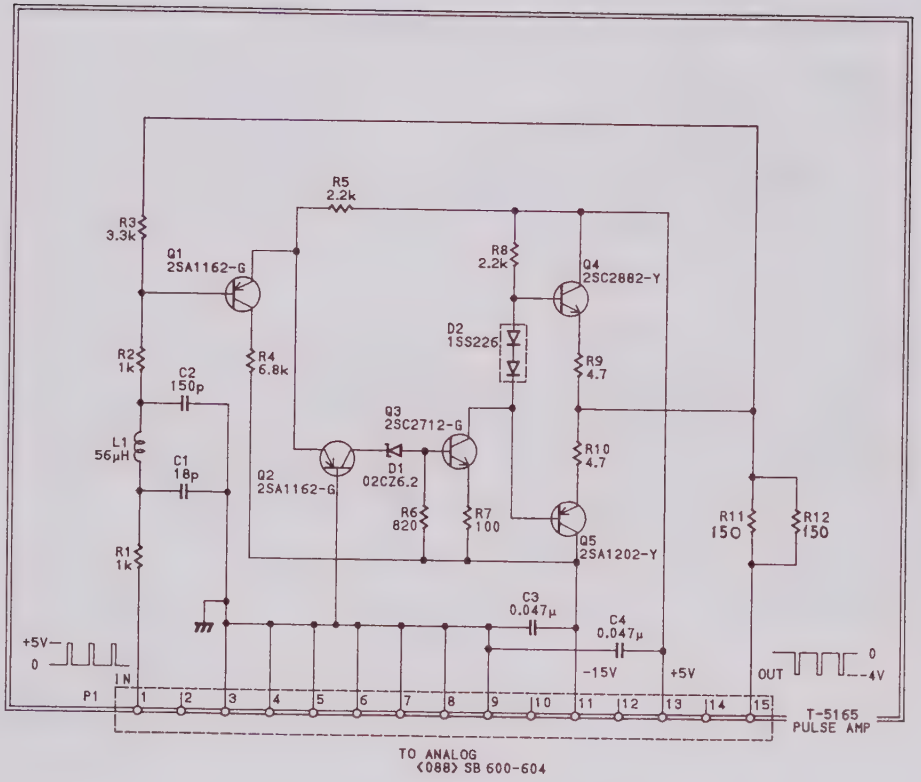


150-	LAST	NOT USED
R	161	
Q	155	
D	152	
P	150	



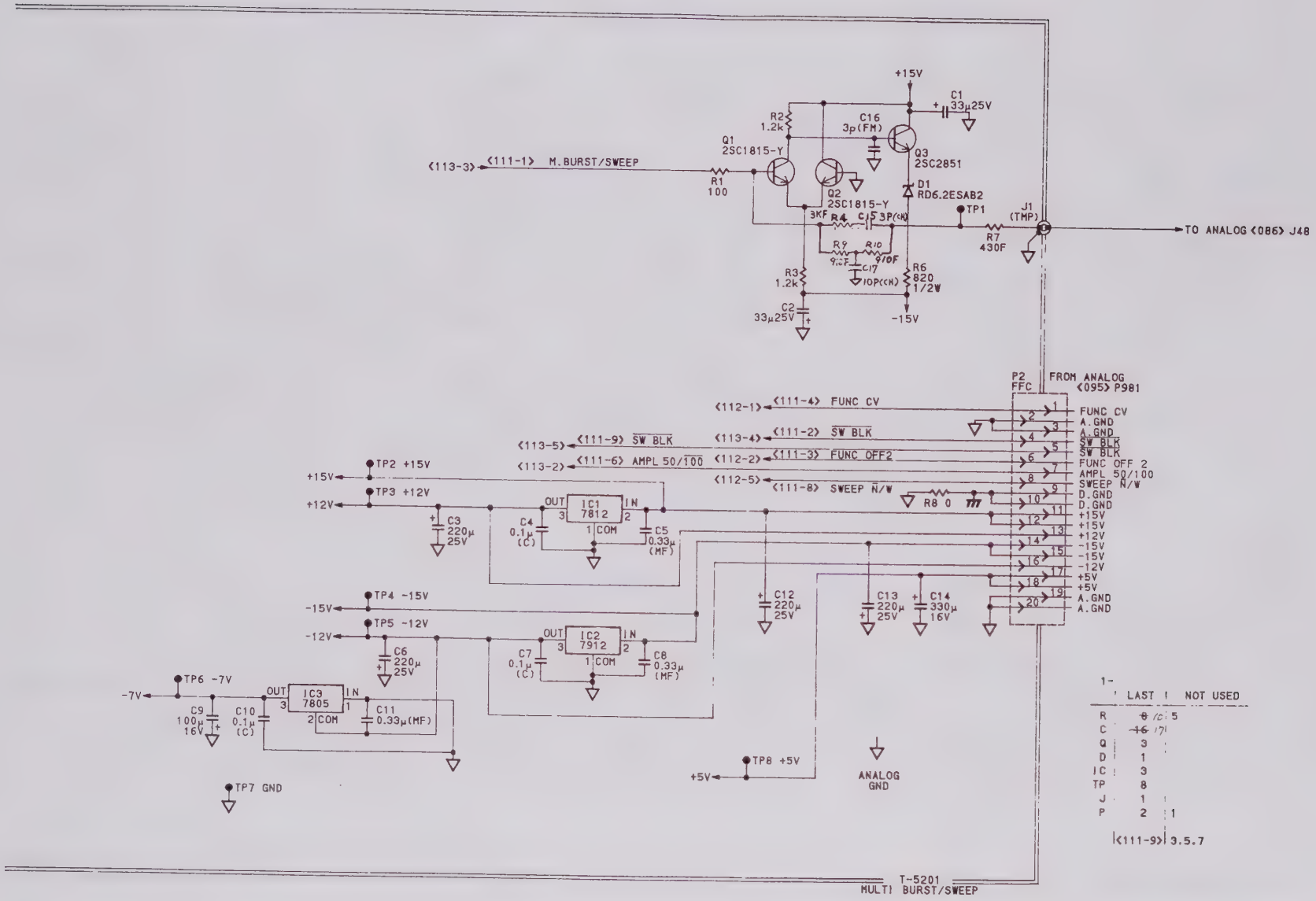
1-

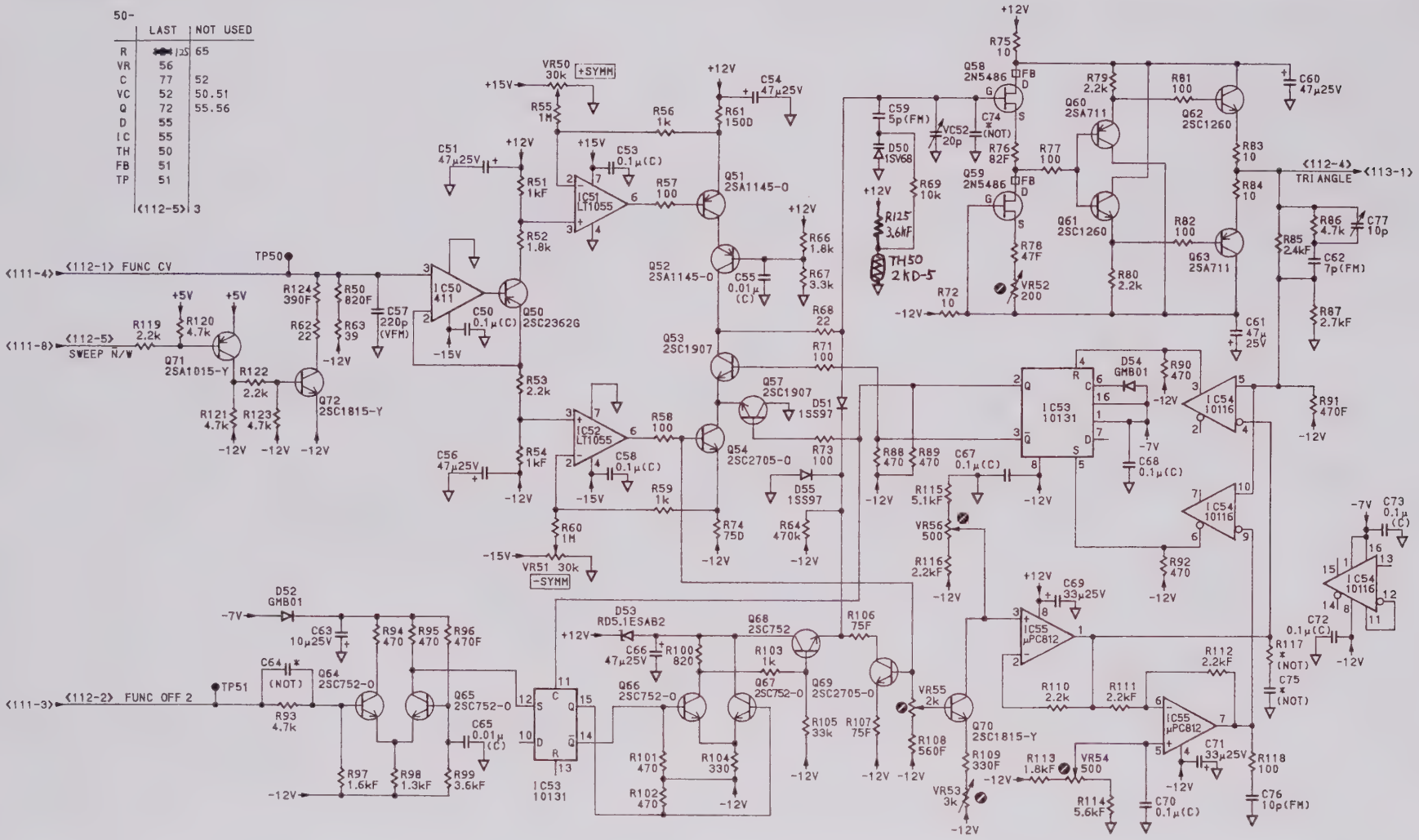
	LAST	NOT USED
R	8	
C	7	
VC	2	
Q	2	
L	2	
P	1	
J	1	



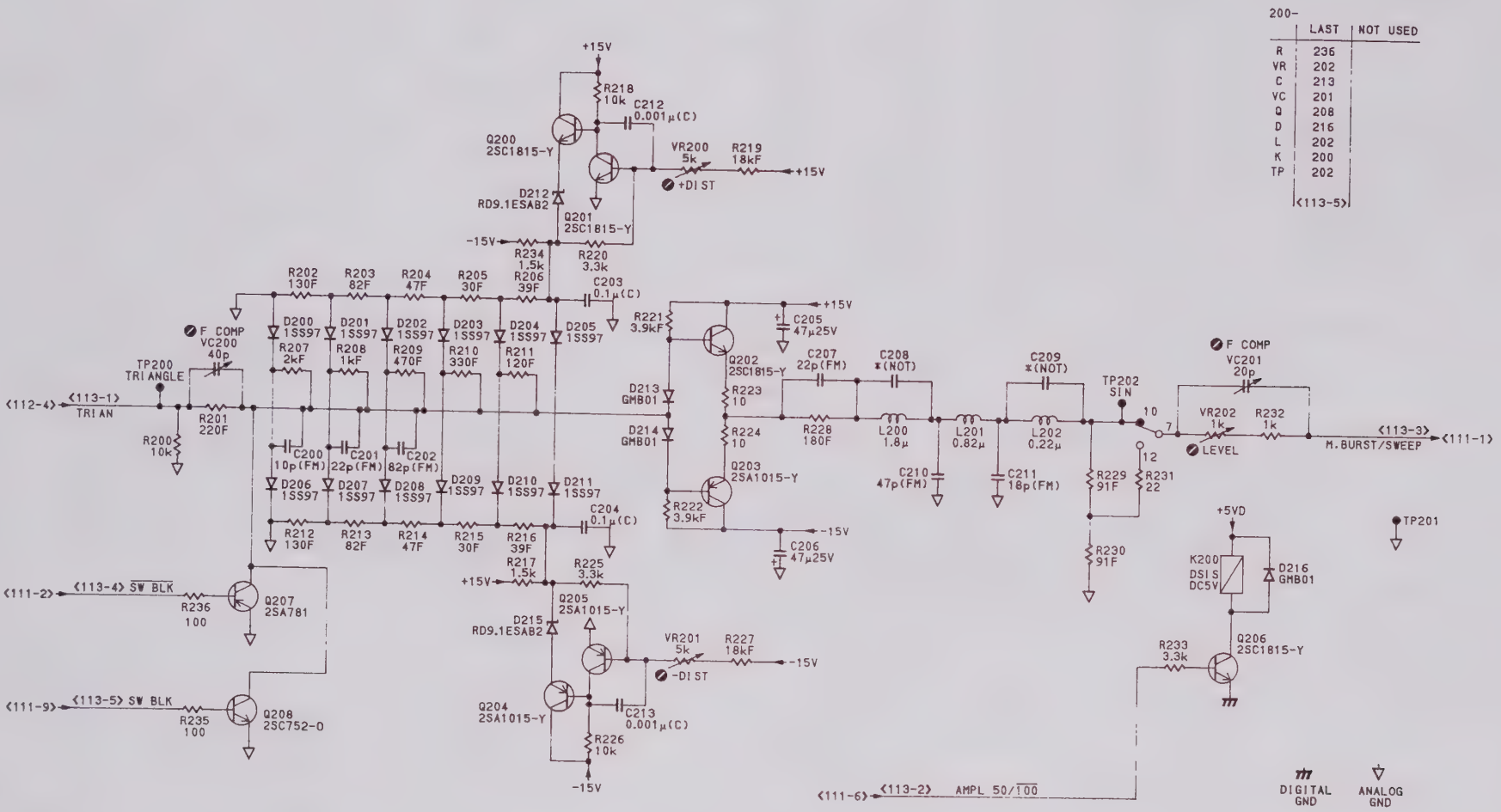
1-

	LAST	NOT USED
R	12	
C	4	
Q	5	
D	2	
L	1	
P	1	

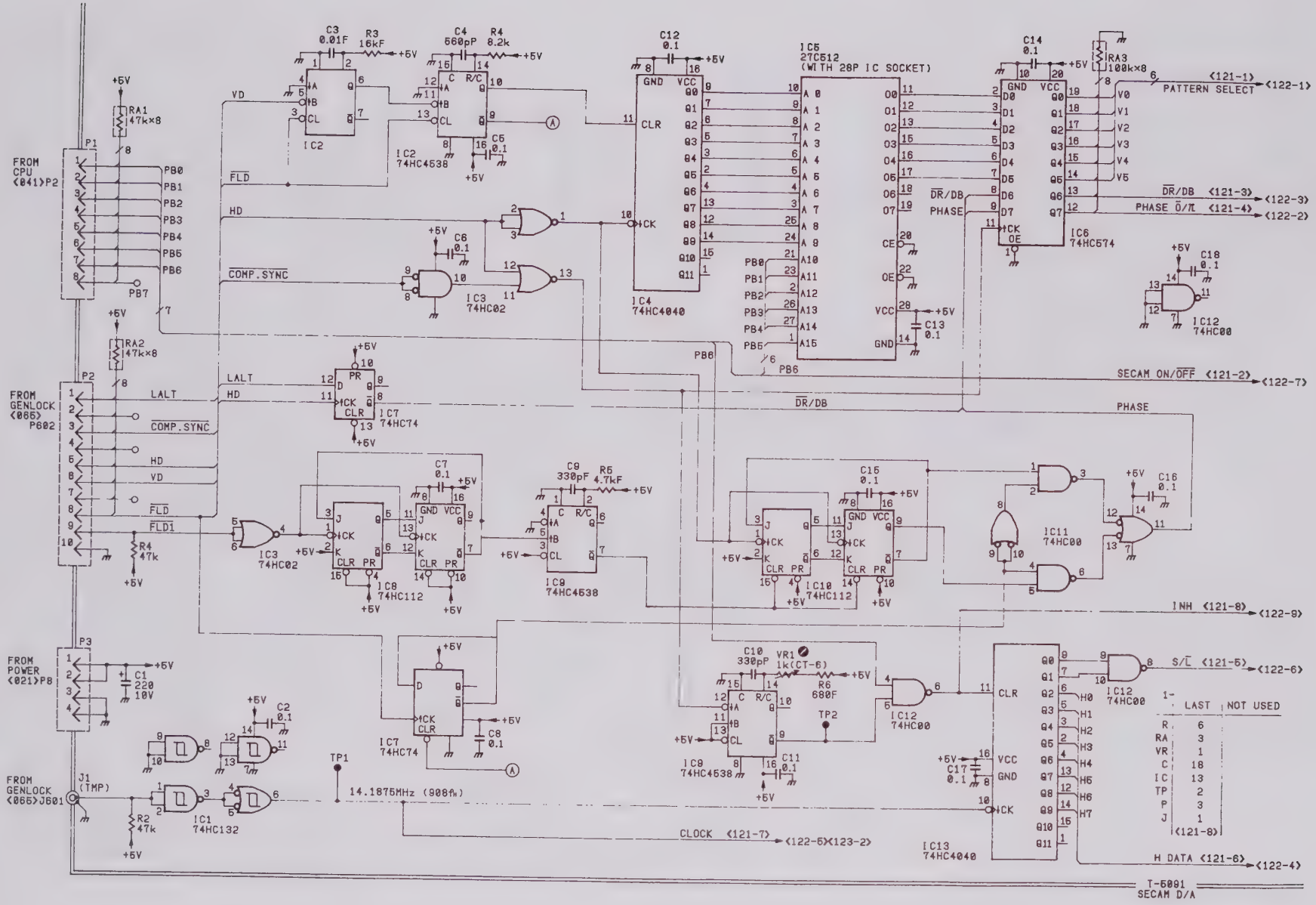

+15V
C1 33μ25V
R2 1.2k
C16 3p(FM)
Q1 2SC1815-Y
Q3 2SC2851
(113-3)
(111-1) M.BURST/SWEEP
R1 100
Q2 2SC1815-Y
D1 RD6.2ESAB2
3KF
R4
C15 3P(CH)
TP1
J1 (TMP)
TO ANALOG (086) J48
R7 430F
R9
R10 470F
C17 10P(CH)
R3 1.2k
R6 820 1/2W
C2 33μ25V
-15V
P2 FFC
FROM ANALOG (095) P981
(112-1)
(111-4) FUNC CV
(113-5)
(111-9) SW BLK
(113-4)
(111-2) SW BLK
(113-2)
(111-6) AMPL 50/100
(112-2)
(111-3) FUNC OFF2
(112-5)
(111-8) SWEEP N/W
R8 0
FUNC CV
A.GND
A.GND
SW BLK
SW BLK
FUNC OFF 2
AMPL 50/100
SWEEP N/W
D.GND
D.GND
+15V
+15V
+12V
-15V
-15V
-12V
+5V
+5V
A.GND
A.GND
TP2 +15V
+15V
TP3 +12V
+12V
C3 220μ 25V
IC1 7812
OUT
IN
COM
C4 0.1μ (C)
C5 0.33μ (MF)
TP4 -15V
-15V
TP5 -12V
-12V
C6 220μ 25V
IC2 7912
C7 0.1μ (C)
C8 0.33μ (MF)
C12 220μ 25V
C13 220μ 25V
C14 330μ 16V
TP6 -7V
-7V
C9 100μ 16V
C10 0.1μ (C)
IC3 7805
C11 0.33μ(MF)
TP7 GND
TP8 +5V
+5V
ANALOG GND
1-
LAST
NOT USED
R 8
C 16
Q 3
D 1
IC 3
TP 8
J 1
P 2 1
(111-9) 3.5.7
T-5201
MULTI BURST/SWEEP

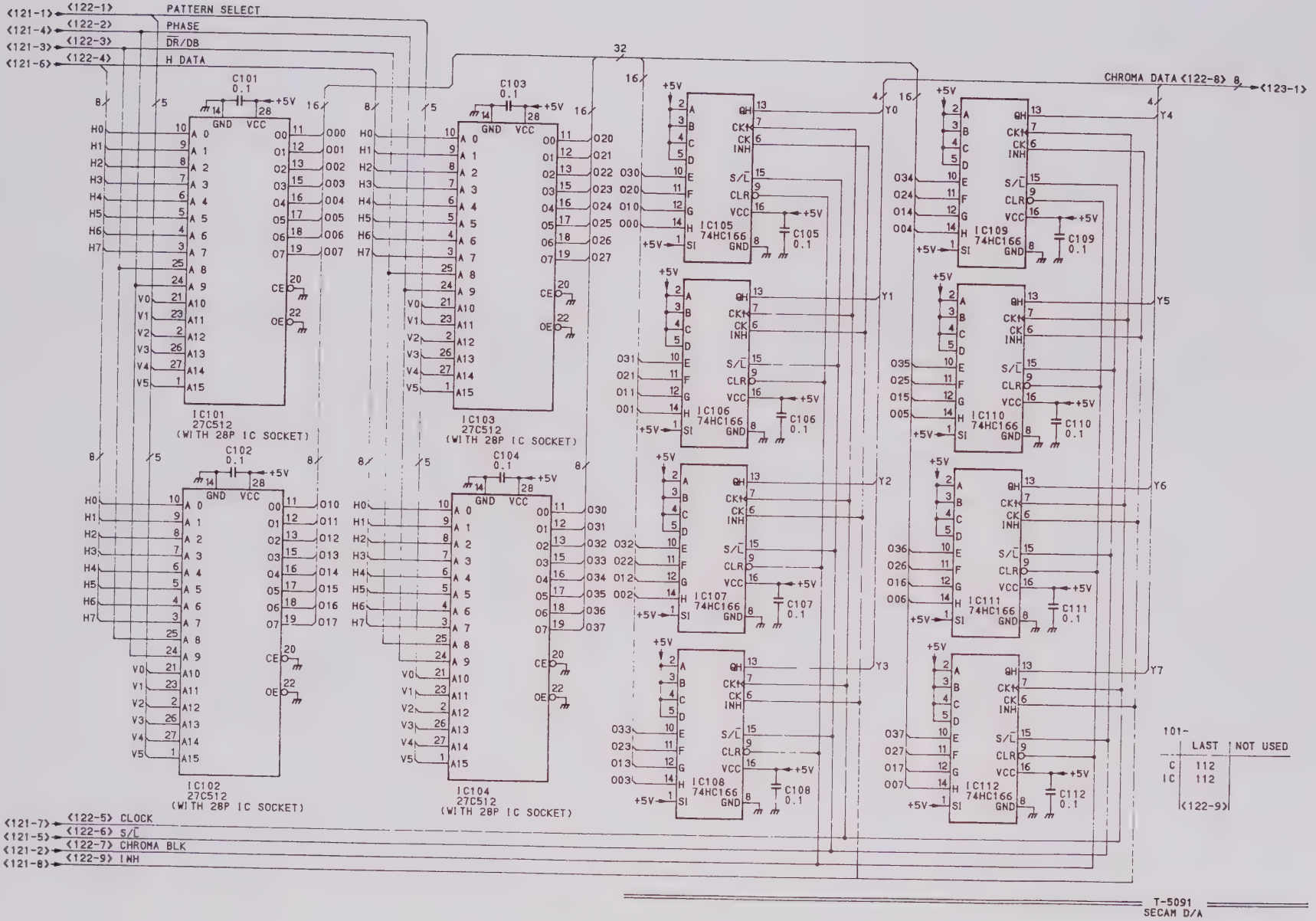


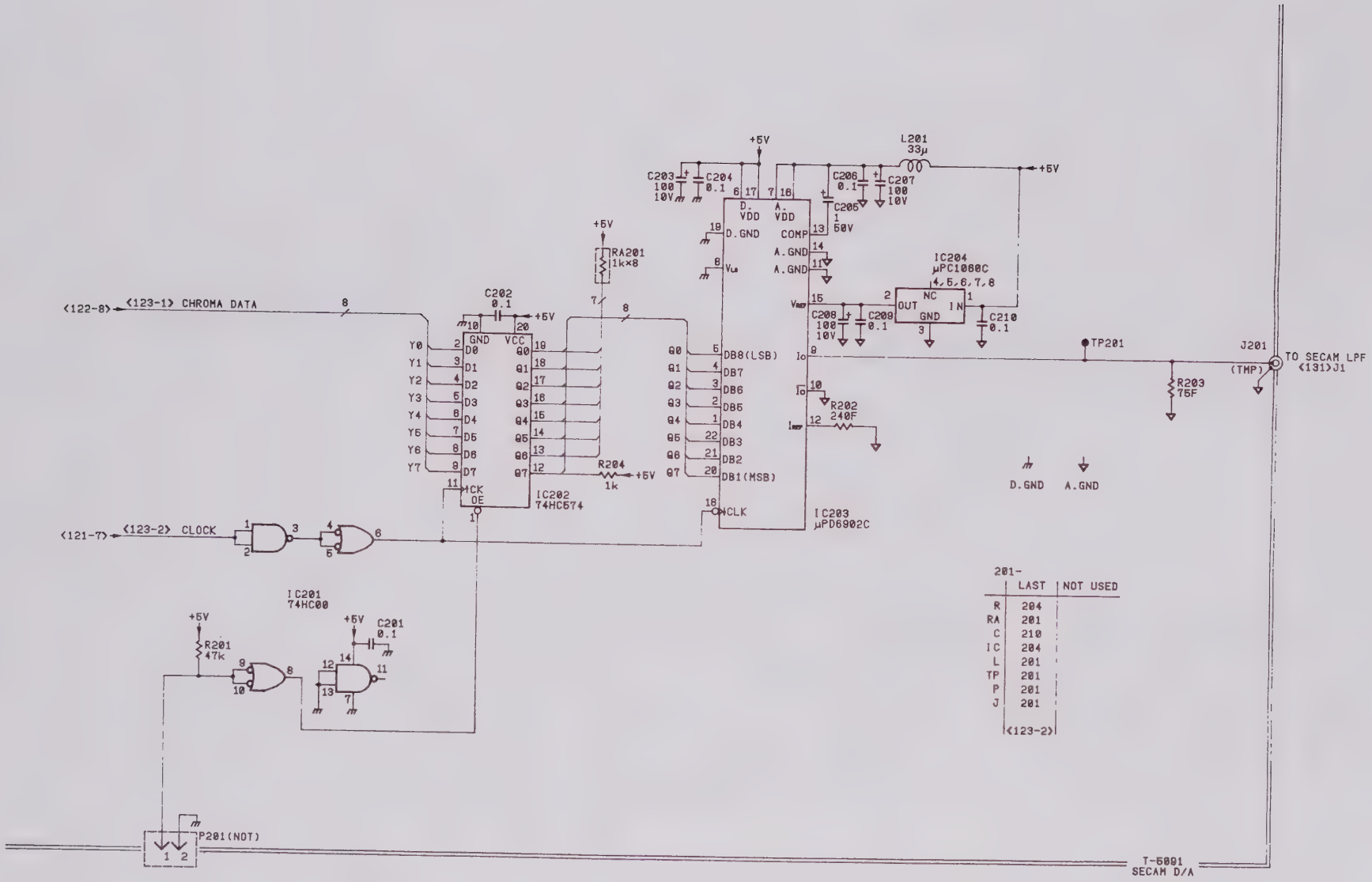
T-5201
MULTI BURST/SWEEP

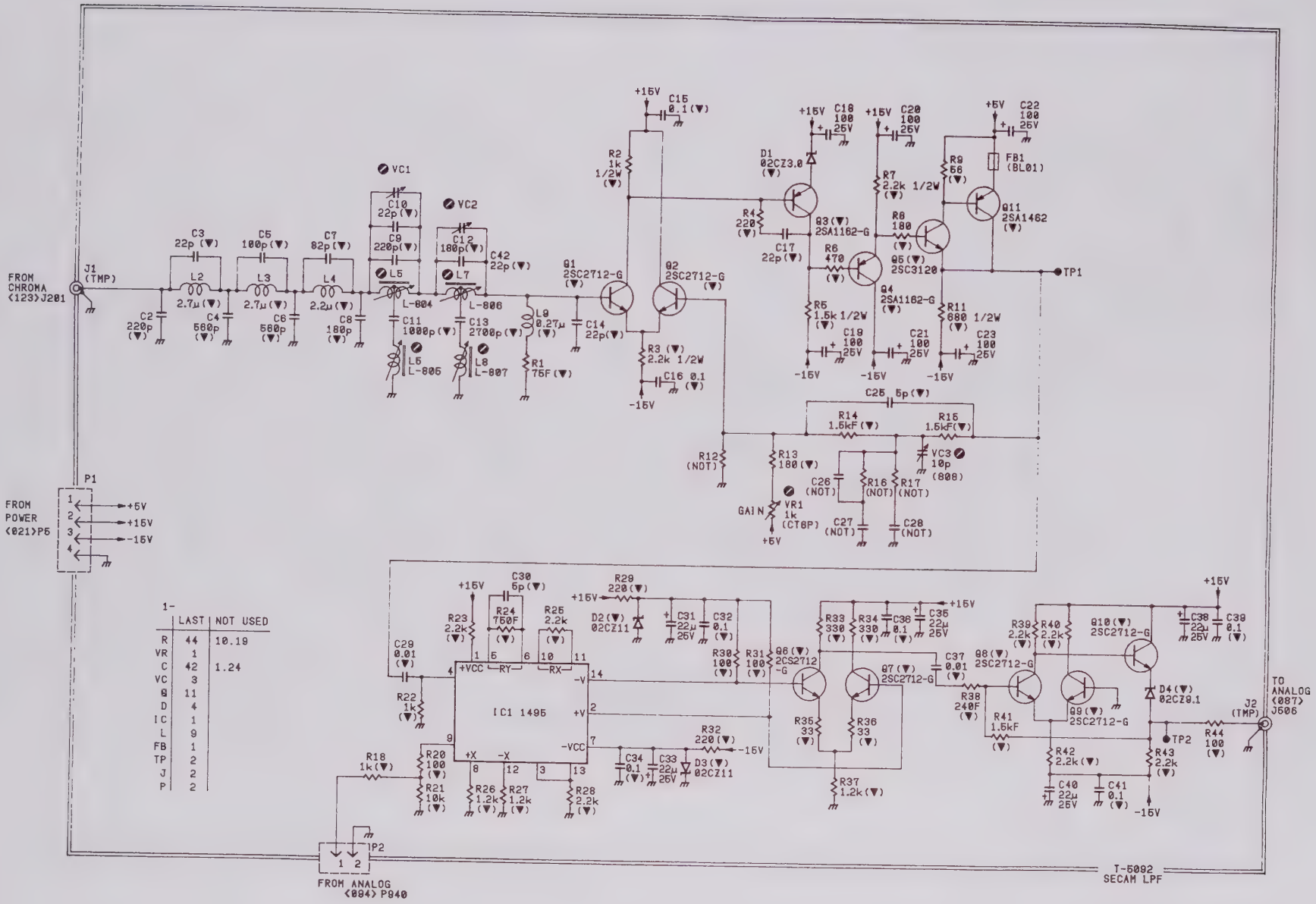

200-
LAST | NOT USED
R 236
VR 202
C 213
VC 201
Q 208
D 216
L 202
K 200
TP 202
<113-5>
+15V
R218 10k
C212 0.001μ(C)
Q200 2SC1815-Y
VR200 5k
R219 18kF
+DIST
D212 RD9.1ESAB2
Q201 2SC1815-Y
-15V
R234 1.5k
R220 3.3k
R202 130F
R203 82F
R204 47F
R205 30F
R206 39F
C203 0.1μ(C)
F COMP VC200 40p
D200 1SS97
D201 1SS97
D202 1SS97
D203 1SS97
D204 1SS97
D205 1SS97
R207 2kF
R208 1kF
R209 470F
R210 330F
R211 120F
TP200 TRIANGLE
<112-4>
<113-1> TRIAN
R201 220F
R200 10k
C200 10p(FM)
C201 22p(FM)
C202 82p(FM)
D206 1SS97
D207 1SS97
D208 1SS97
D209 1SS97
D210 1SS97
D211 1SS97
C204 0.1μ(C)
R212 130F
R213 82F
R214 47F
R215 30F
R216 39F
R217 1.5k
R225 3.3k
+15V
Q205 2SA1015-Y
D215 RD9.1ESAB2
VR201 5k
R227 18kF
-DIST
-15V
Q204 2SA1015-Y
C213 0.001μ(C)
R226 10k
-15V
<111-2>
<113-4> SW BLK
R236 100
Q207 2SA781
<111-9>
<113-5> SW BLK
R235 100
Q208 2SC752-0
R221 3.9kF
Q202 2SC1815-Y
C205 47μ25V
+15V
D213 GMB01
D214 GMB01
R223 10
R224 10
Q203 2SA1015-Y
R222 3.9kF
-15V
C206 47μ25V
C207 22p(FM)
C208 *(NOT)
C209 *(NOT)
R228 180F
L200 1.8μ
L201 0.82μ
L202 0.22μ
C210 47p(FM)
C211 18p(FM)
R229 91F
R231 22
R230 91F
TP202 SIN
10
7
12
F COMP VC201 20p
VR202 1k
R232 1k
LEVEL
<113-3>
<111-1>
M.BURST/SWEEP
+5VD
K200 DSI S DC5V
D216 GMB01
R233 3.3k
Q206 2SC1815-Y
TP201
<111-6>
<113-2> AMPL 50/100
DIGITAL GND
ANALOG GND

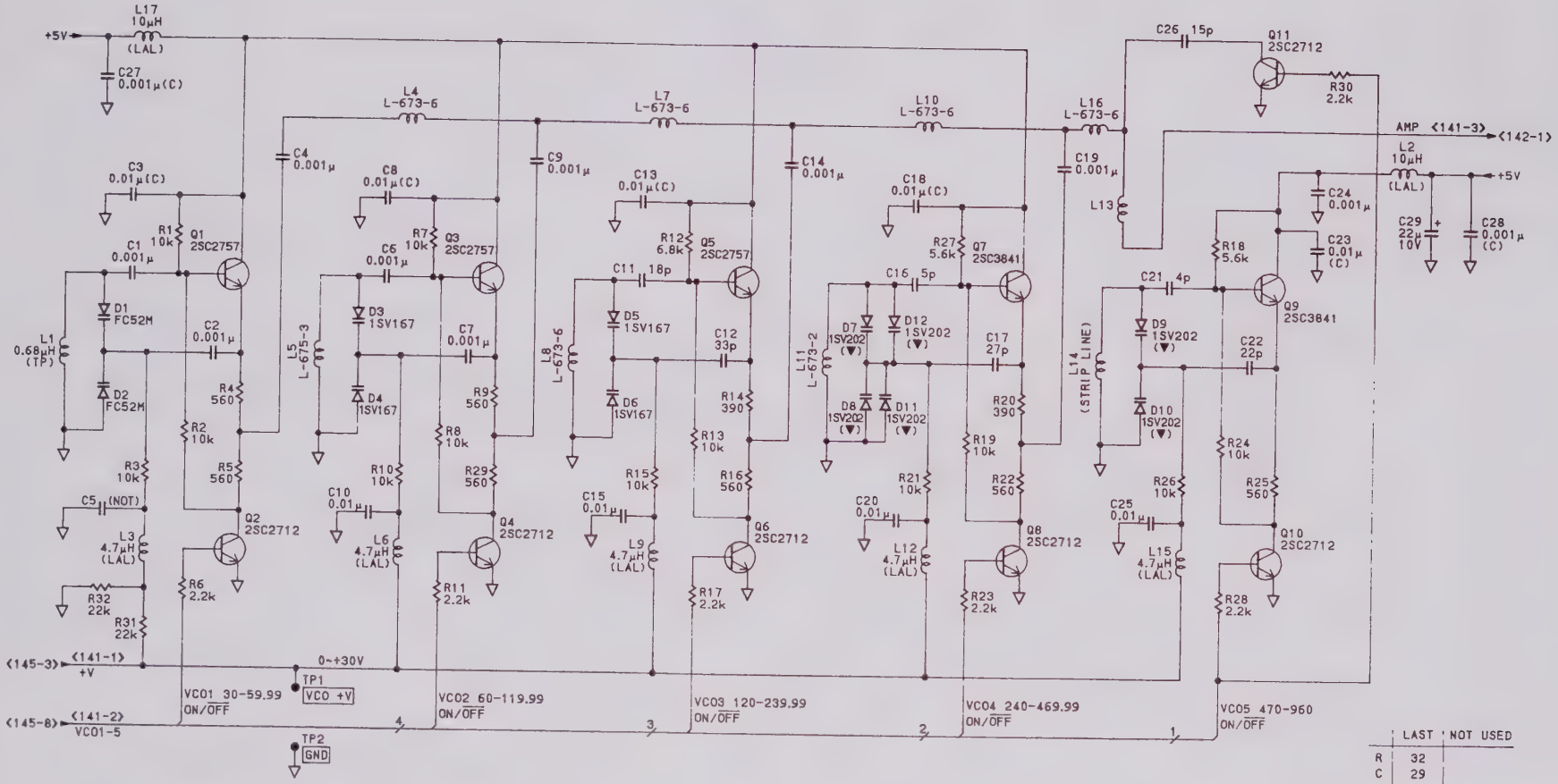
T-5201


FROM CPU (041)P2
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
FLD
HD
COMP.SYNC
VD
LALT
FROM GENLOCK (066) P602
FLD1
FROM POWER (021)P8
FROM GENLOCK (066)J601
14.1875MHz (908fh)
IC1 74HC132
IC2 74HC4538
IC3 74HC02
IC4 74HC4040
IC5 27C512 (WITH 28P IC SOCKET)
IC6 74HC574
IC7 74HC74
IC8 74HC112
IC9 74HC4538
IC10 74HC112
IC11 74HC00
IC12 74HC00
IC13 74HC4040
DR/DB
PHASE
PATTERN SELECT
SECAM ON/OFF
INH
S/L
CLOCK
H DATA
LAST
NOT USED
T-5091 SECAM D/A

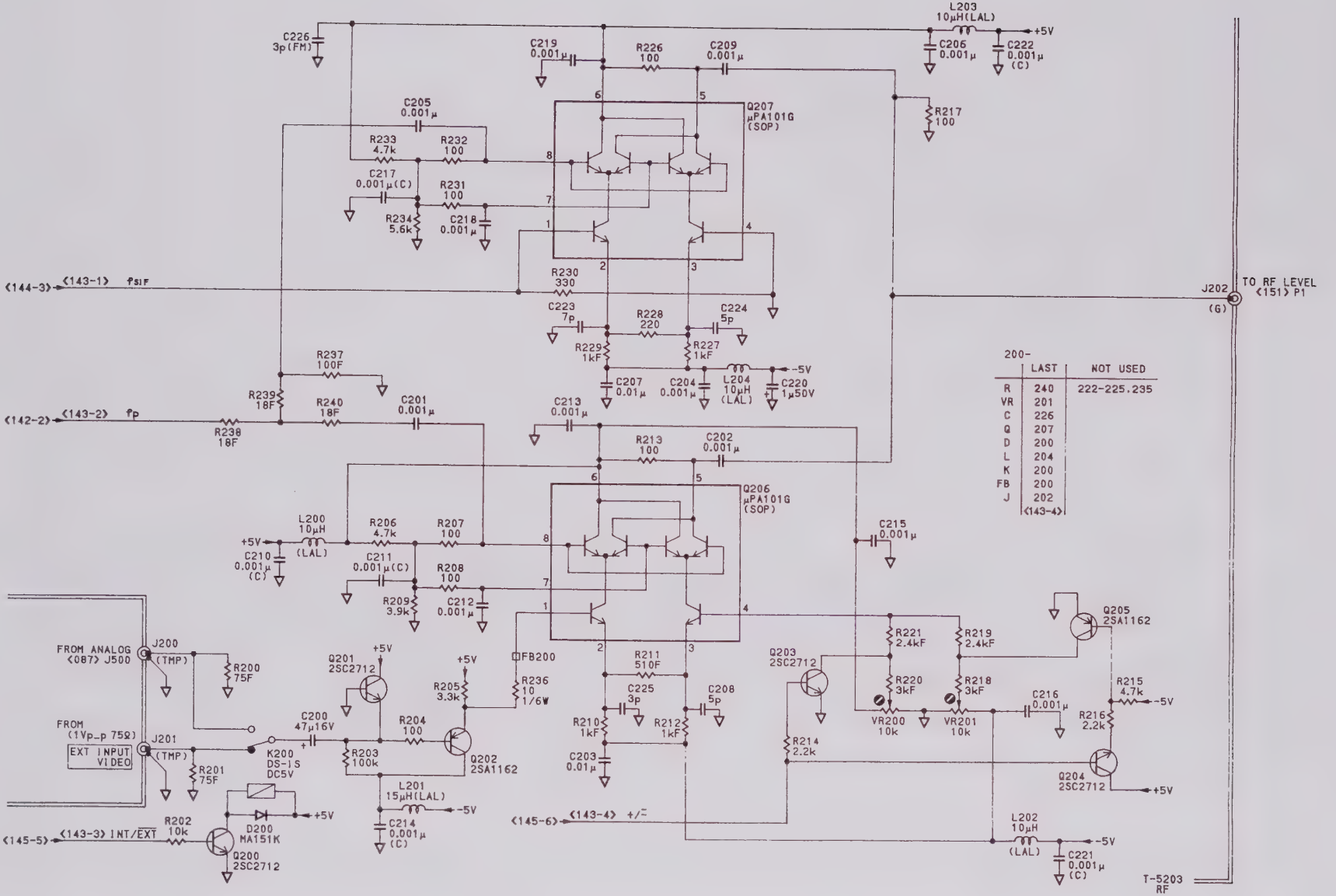

PATTERN SELECT
PHASE
DR/DB
H DATA
CHROMA DATA
CLOCK
S/L
CHROMA BLK
INH
IC101 27C512 (WITH 28P IC SOCKET)
IC102 27C512 (WITH 28P IC SOCKET)
IC103 27C512 (WITH 28P IC SOCKET)
IC104 27C512 (WITH 28P IC SOCKET)
IC105 74HC166
IC106 74HC166
IC107 74HC166
IC108 74HC166
IC109 74HC166
IC110 74HC166
IC111 74HC166
IC112 74HC166
LAST
NOT USED
T-5091
SECAM D/A

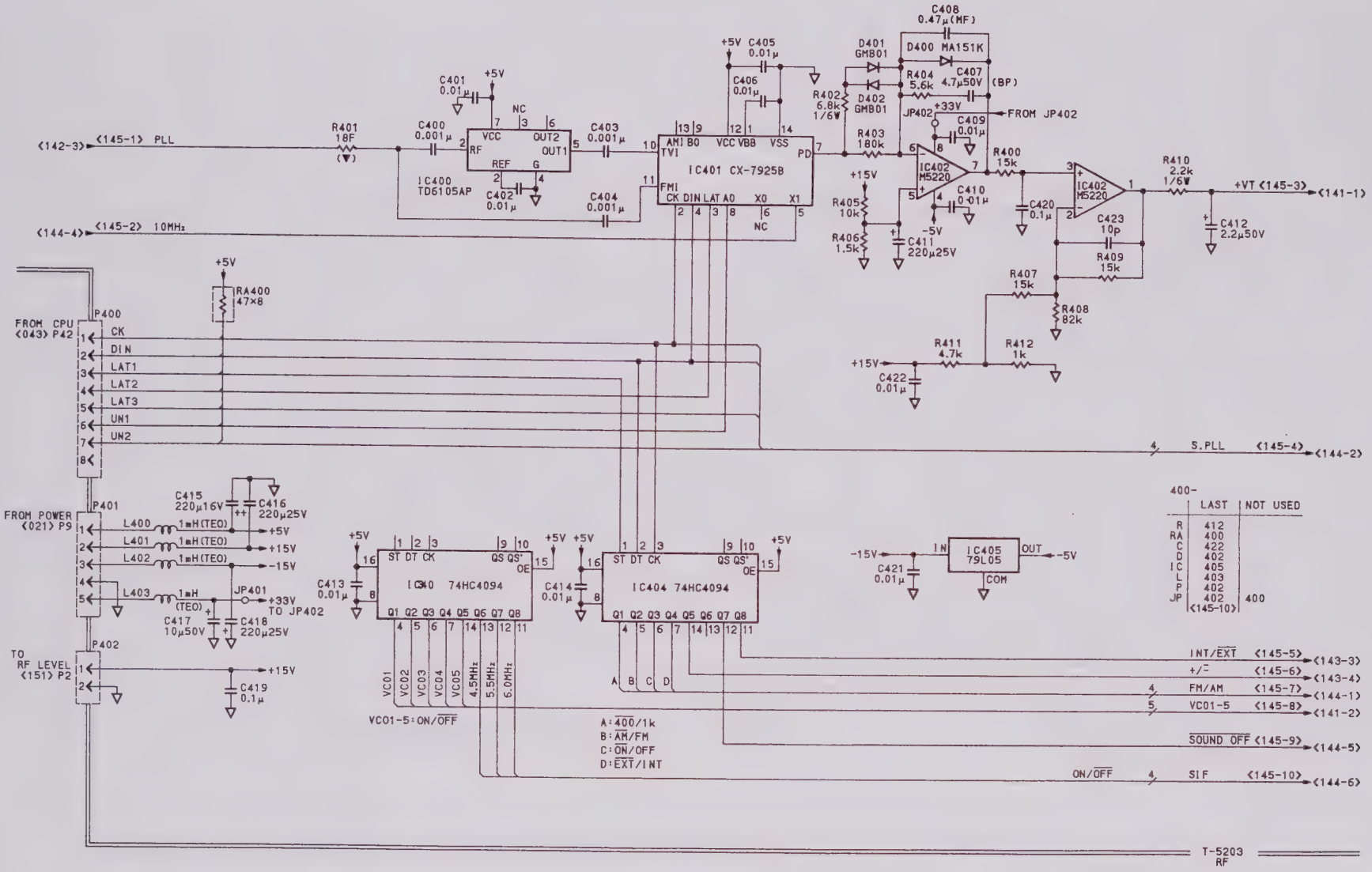

(122-8)
(123-1) CHROMA DATA
8
C202
0.1
+5V
RA201
1k×8
IC202
74HC574
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
GND
VCC
D0
D1
D2
D3
D4
D5
D6
D7
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
CK
OE
R204
1k
(121-7)
(123-2) CLOCK
IC201
74HC00
R201
47k
C201
0.1
P201(NOT)
1 2
C203
100
10V
C204
0.1
C205
1
50V
C206
0.1
C207
100
10V
L201
33μ
D. VDD
A. VDD
D.GND
COMP
A.GND
A.GND
Vcc
Vmon
IC204
μPC1060C
4,5,6,7,8
NC
OUT
IN
GND
C208
100
10V
C209
0.1
C210
0.1
DB8(LSB)
DB7
DB6
DB5
DB4
DB3
DB2
DB1(MSB)
CLK
IC203
μPD6902C
Io
Imon
R202
240F
TP201
J201
(TMP)
TO SECAM LPF
(131)J1
R203
75F
D.GND
A.GND
201-
LAST
NOT USED
R 204
RA 201
C 210
IC 204
L 201
TP 201
P 201
J 201
(123-2)
T-5001
SECAM D/A

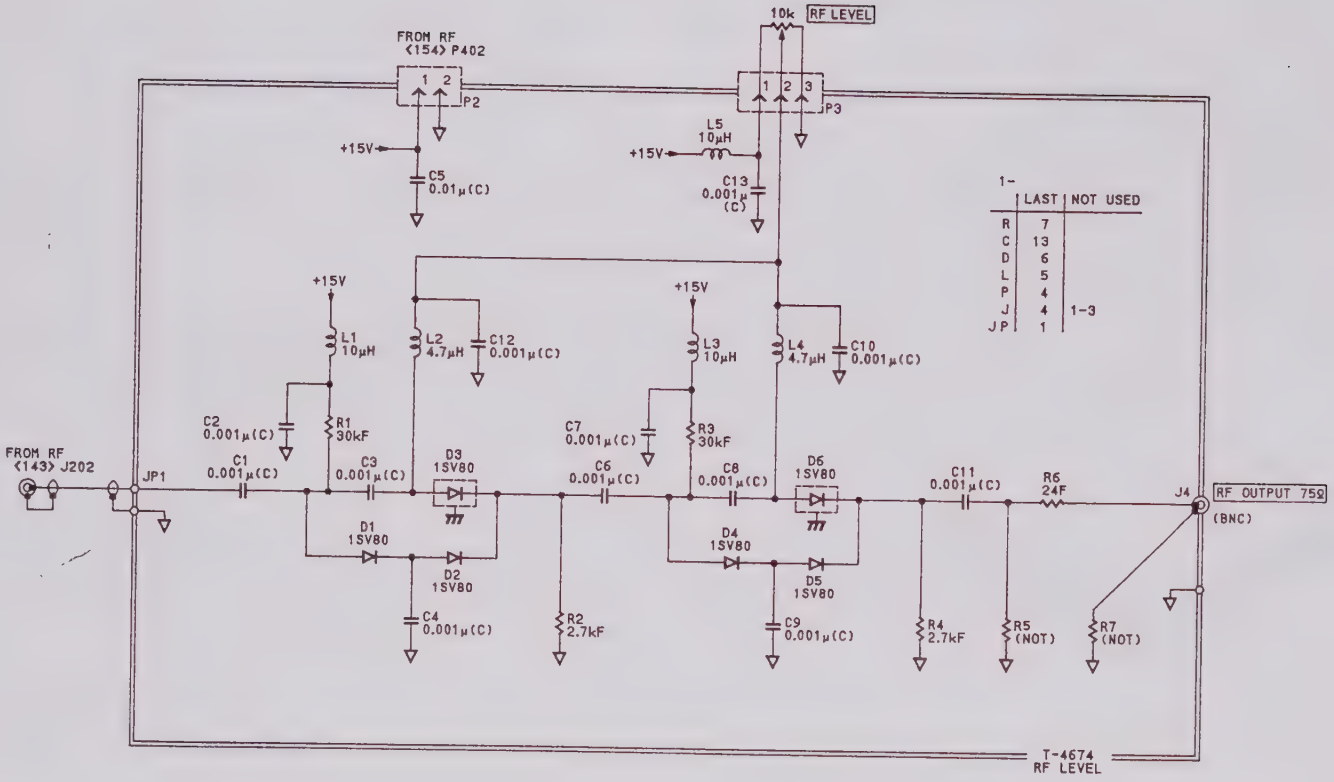

FROM CHROMA (123) J201
J1 (TMP)
C2 220p (▼)
C3 22p (▼)
L2 2.7μ (▼)
C4 560p (▼)
C5 100p (▼)
L3 2.7μ (▼)
C6 560p (▼)
C7 82p (▼)
L4 2.2μ (▼)
C8 180p (▼)
VC1
C10 22p (▼)
C9 220p (▼)
L5
L-804
C11 1000p (▼)
L6 L-805
VC2
C12 180p (▼)
C42 22p (▼)
L7
L-806
C13 2700p (▼)
L8 L-807
L9 0.27μ (▼)
R1 75F (▼)
+15V
C15 0.1 (▼)
R2 1k 1/2W (▼)
Q1 2SC2712-G (▼)
Q2 2SC2712-G (▼)
C14 22p (▼)
R3 (▼) 2.2k 1/2W
C16 0.1 (▼)
-15V
D1 02CZ3.0 (▼)
R4 220 (▼)
C17 22p (▼)
Q3 (▼) 2SA1162-G
R6 470 (▼)
R5 1.5k 1/2W (▼)
Q4 2SA1162-G (▼)
C18 100 25V
C19 100 25V
C20 100 25V
C21 100 25V
C22 100 25V
C23 100 25V
R7 2.2k 1/2W (▼)
R8 180 (▼)
Q5 (▼) 2SC3120
R9 56 (▼)
FB1 (BL01)
Q11 2SA1462 (▼)
R11 680 1/2W (▼)
TP1
C25 5p (▼)
R14 1.5kF (▼)
R15 1.5kF (▼)
R12 (NOT)
R13 180 (▼)
C26 (NOT)
R16 (NOT)
R17 (NOT)
VC3 10p (808)
GAIN
VR1 1k (CT8P)
C27 (NOT)
C28 (NOT)
P1
FROM POWER (021) P6
+5V
+15V
-15V
1-
LAST | NOT USED
R 44 | 10.19
VR 1
C 42 | 1.24
VC 3
S 11
D 4
IC 1
L 9
FB 1
TP 2
J 2
P 2
C30 6p (▼)
R23 2.2k (▼)
R24 750F (▼)
R25 2.2k (▼)
C29 0.01 (▼)
R22 1k (▼)
IC1 1495
+VCC
RY
RX
-V
+V
-VCC
+X
-X
R20 100 (▼)
R21 10k (▼)
R26 1.2k (▼)
R27 1.2k (▼)
R28 2.2k (▼)
R18 1k (▼)
D2 (▼) 02CZ11
R29 220 (▼)
C31 22μ 25V
C32 0.1 (▼)
R30 100 (▼)
R31 100 (▼)
Q6 (▼) 2CS2712-G
Q7 (▼) 2SC2712-G
R32 220 (▼)
C34 0.1 (▼)
C33 22μ 25V
D3 (▼) 02CZ11
R33 330 (▼)
R34 330 (▼)
C36 0.1 (▼)
C35 22μ 25V
R35 33 (▼)
R36 33 (▼)
R37 1.2k (▼)
C37 0.01 (▼)
R38 240F (▼)
Q8 (▼) 2SC2712-G
Q9 (▼) 2SC2712-G
Q10 (▼) 2SC2712-G
R39 2.2k (▼)
R40 2.2k (▼)
C38 22μ 25V
C39 0.1 (▼)
D4 (▼) 02CZ9.1
R41 1.5kF (▼)
R42 2.2k (▼)
R43 2.2k (▼)
C40 22μ 25V
C41 0.1 (▼)
TP2
R44 100 (▼)
J2 (TMP)
TO ANALOG (087) J606
IP2
1 2
FROM ANALOG (084) P840
T-5092
SECAM LPF



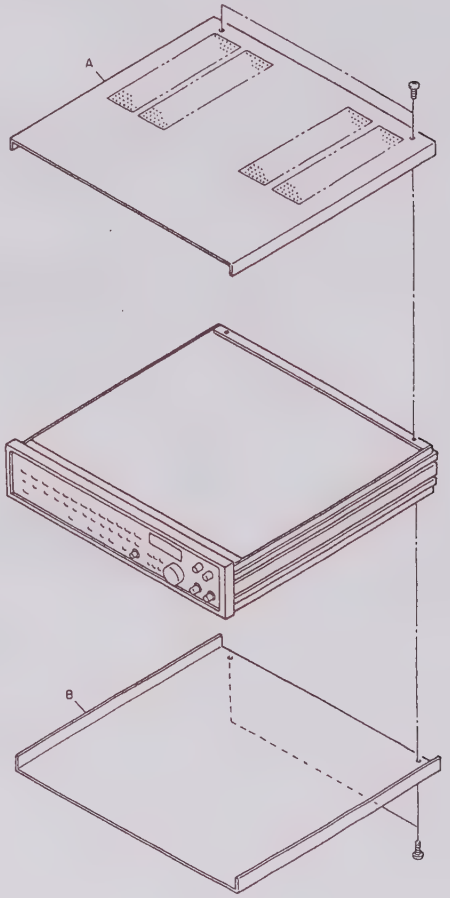
	LAST	NOT USED
R	32	
C	29	
Q	11	
D	12	
L	17	
TP	2	
	⟨141-3⟩	


L203 10μH(LAL)
+5V
C226 3p(FM)
C219 0.001μ
R226 100
C209 0.001μ
C206 0.001μ
C222 0.001μ (C)
C205 0.001μ
Q207 μPA101G (SOP)
R217 100
R233 4.7k
R232 100
C217 0.001μ(C)
R231 100
R234 5.6k
C218 0.001μ
R230 330
J202
TO RF LEVEL (151) P1
(G)
(144-3)
(143-1) fSIF
C223 7p
R228 220
C224 5p
R229 1kF
R227 1kF
-5V
C207 0.01μ
C204 0.001μ
L204 10μH (LAL)
C220 1μ50V
R237 100F
R239 18F
R240 18F
C201 0.001μ
(142-2)
(143-2) fP
R238 18F
C213 0.001μ
R213 100
C202 0.001μ
Q206 μPA101G (SOP)
L200 10μH (LAL)
R206 4.7k
R207 100
C210 0.001μ (C)
C211 0.001μ(C)
R208 100
R209 3.9k
C212 0.001μ
C215 0.001μ
200-
LAST
NOT USED
R 240
VR 201
C 226
Q 207
D 200
L 204
K 200
FB 200
J 202
(143-4)
222-225.235
FROM ANALOG (087) J500
J200 (TMP)
R200 75F
FB200
R236 10 1/6W
Q201 2SC2712
R205 3.3k
C225 3p
C208 5p
R211 510F
R210 1kF
R212 1kF
C203 0.01μ
Q203 2SC2712
R221 2.4kF
R219 2.4kF
R220 3kF
R218 3kF
VR200 10k
VR201 10k
C216 0.001μ
R215 4.7k
-5V
R216 2.2k
R214 2.2k
Q205 2SA1162
Q204 2SC2712
+5V
FROM (1Vp-p 75Ω)
EXT INPUT VIDEO
J201 (TMP)
R201 75F
C200 47μ16V
R204 100
R203 100k
Q202 2SA1162
K200 DS-1S DC5V
L201 15μH(LAL)
C214 0.001μ (C)
R202 10k
D200 MA151K
Q200 2SC2712
(145-5)
(143-3) INT/EXT
(145-6)
(143-4) +/-
L202 10μH (LAL)
C221 0.001μ (C)
T-5203 RF


C408 0.47µ(MF)
D400 MA151K
D401 GMB01
D402 GMB01
C407 4.7µ50V (BP)
R404 5.6k
R402 6.8k 1/6W
JP402 +33V
FROM JP402
C409 0.01µ
R403 180k
C401 0.01µ
C400 0.001µ
R401 18F (V)
IC400 TD6105AP
C402 0.01µ
C403 0.001µ
C404 0.001µ
C405 0.01µ
C406 0.01µ
IC401 CX-7925B
R405 10k
R406 1.5k
C411 220µ25V
IC402 M5220
R400 15k
C410 0.01µ
C420 0.1µ
C423 10p
R409 15k
R407 15k
R408 82k
R410 2.2k 1/6W
C412 2.2µ50V
+VT (145-3) (141-1)
R411 4.7k
R412 1k
C422 0.01µ
(142-3) (145-1) PLL
(144-4) (145-2) 10MHz
RA400 47×8
FROM CPU (043) P42
P400
CK
DIN
LAT1
LAT2
LAT3
UN1
UN2
4 S.PLL (145-4) (144-2)
FROM POWER (021) P9
P401
L400 1mH(TEO)
L401 1mH(TEO)
L402 1mH(TEO)
L403 1mH (TEO)
JP401
+33V TO JP402
C415 220µ16V
C416 220µ25V
C417 10µ50V
C418 220µ25V
TO RF LEVEL (151) P2
P402
C419 0.1µ
C413 0.01µ
C414 0.01µ
IC403 74HC4094
IC404 74HC4094
ST DT CK
QS QS'
OE
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8
VCO1
VCO2
VCO3
VCO4
VCO5
4.5MHz
6.0MHz
VCO1-5:ON/OFF
A:400/1k
B:AM/FM
C:ON/OFF
D:EXT/INT
A B C D
IC405 79L05
IN
OUT
COM
C421 0.01µ
400-
LAST NOT USED
R 412
RA 400
C 422
D 402
IC 405
L 403
P 402
JP 402 400
(145-10)
INT/EXT (145-5) (143-3)
+/- (145-6) (143-4)
4 FM/AM (145-7) (144-1)
5 VCO1-5 (145-8) (141-2)
SOUND OFF (145-9) (144-5)
ON/OFF 4 SIF (145-10) (144-6)
T-5203 RF


10k
RF LEVEL
FROM RF
(154) P402
P2
P3
+15V
L5
10µH
C5
0.01µ(C)
C13
0.001µ
(C)
1-
LAST
NOT USED
R 7
C 13
D 6
L 5
P 4
J 4 1-3
JP 1
L1
10µH
L2
4.7µH
C12
0.001µ(C)
L3
10µH
L4
4.7µH
C10
0.001µ(C)
C2
0.001µ(C)
R1
30kF
C7
0.001µ(C)
R3
30kF
FROM RF
(143) J202
JP1
C1
0.001µ(C)
C3
0.001µ(C)
D3
1SV80
C6
0.001µ(C)
C8
0.001µ(C)
D6
1SV80
C11
0.001µ(C)
R6
24F
J4
RF OUTPUT 75Ω
(BNC)
D1
1SV80
D2
1SV80
D4
1SV80
D5
1SV80
C4
0.001µ(C)
R2
2.7kF
C9
0.001µ(C)
R4
2.7kF
R5
(NOT)
R7
(NOT)
T-4674
RF LEVEL

- Remove two screws and slide the Top Cover (A) backward to remove it.
- Remove two screws and slide the Bottom Cover (B) backward to remove it.



8. PARTS LIST

No.	LDR PT No.	DESCRIPTION			
*** CPU BOARD			T-5205 ***		
-RESISTORS-					
JP1	1000000009	CARBON FILM	0 OHM		
JP201	1000000009	CARBON FILM	0 OHM		
JP204	1000000009	CARBON FILM	0 OHM		
JP222	1000000009	CARBON FILM	0 OHM		
R1	1000473002	CARBON FILM	47K OHM	5%	1/6W
R2	1000103009	CARBON FILM	10K OHM	5%	1/6W
R3	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R4	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R5	1000102007	CARBON FILM	1K OHM	5%	1/6W
R21	1000221005	CARBON FILM	220 OHM	5%	1/6W
R22	1000271000	CARBON FILM	270 OHM	5%	1/6W
R23	1000102007	CARBON FILM	1K OHM	5%	1/6W
R24	1000102007	CARBON FILM	1K OHM	5%	1/6W
R25	1000473002	CARBON FILM	47K OHM	5%	1/6W
R26	1000391000	CARBON FILM	390 OHM	5%	1/6W
R41	1000473002	CARBON FILM	47K OHM	5%	1/6W
R81	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R121	1000102007	CARBON FILM	1K OHM	5%	1/6W
R122	1000101005	CARBON FILM	100 OHM	5%	1/6W
R141	1000221005	CARBON FILM	220 OHM	5%	1/6W
R142	1000470006	CARBON FILM	47 OHM	5%	1/6W
R201	1000103009	CARBON FILM	10K OHM	5%	1/6W
R203	1000103009	CARBON FILM	10K OHM	5%	1/6W
R221	1000473002	CARBON FILM	47K OHM	5%	1/6W
R222	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R223	1000103009	CARBON FILM	10K OHM	5%	1/6W
R224	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R225	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R226	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R227	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R228	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R229	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R241	1000103009	CARBON FILM	10K OHM	5%	1/6W
R261	1000103009	CARBON FILM	10K OHM	5%	1/6W
R262	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R263	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R264	1000103009	CARBON FILM	10K OHM	5%	1/6W
R265	1000221005	CARBON FILM	220 OHM	5%	1/6W
R283	1000103009	CARBON FILM	10K OHM	5%	1/6W
R284	1000103009	CARBON FILM	10K OHM	5%	1/6W
R285	1000103009	CARBON FILM	10K OHM	5%	1/6W
R286	1000103009	CARBON FILM	10K OHM	5%	1/6W
R287	1000103009	CARBON FILM	10K OHM	5%	1/6W
R301	1000103009	CARBON FILM	10K OHM	5%	1/6W
R302	1000103009	CARBON FILM	10K OHM	5%	1/6W
RA1	1511473115	RESISTOR ARRAY	47K OHMX4	5%	1/8W
RA2	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA3	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA4	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W

RA5	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA6	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA7	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA8	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA9	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA10	1511473115	RESISTOR ARRAY	47K OHMX4	5%	1/8W
RA11	1511473115	RESISTOR ARRAY	47K OHMX4	5%	1/8W
RA81	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA121	1511332117	RESISTOR ARRAY	3.3K OHMX4	5%	1/8W
RA122	1515332111	RESISTOR ARRAY	3.3K OHMX9	5%	1/8W
RA201	1515103116	RESISTOR ARRAY	10K OHMX8	5%	1/8W
RA202	1515103116	RESISTOR ARRAY	10K OHMX8	5%	1/8W
RA203	1515103116	RESISTOR ARRAY	10K OHMX8	5%	1/8W
RA204	1515103116	RESISTOR ARRAY	10K OHMX8	5%	1/8W
RA281	1515102114	RESISTOR ARRAY	1K OHMX9	5%	1/8W
—VARIABLE RESISTORS—					
VR261	1711004051	METAL GLAZE	2K OHM	20%	1/3W
-CAPACITOR-					
CT-5532-C1	2090104012	CERAMIC	0.1uF	80/-20%	50V
C1	2090104012	CERAMIC	0.1uF	80/-20%	50V
C2	2090104012	CERAMIC	0.1uF	80/-20%	50V
C3	2090104012	CERAMIC	0.1uF	80/-20%	50V
C4	2520220006	CERAMIC	22pF	5%	500V
C5	2520270001	CERAMIC	27pF	5%	500V
C6	2090104012	CERAMIC	0.1uF	80/-20%	50V
C7	2250229047	ELECTROLYTIC	2.2uF	20%	50V
C8	2090104012	CERAMIC	0.1uF	80/-20%	50V
C22	2090104012	CERAMIC	0.1uF	80/-20%	50V
C23	2090104012	CERAMIC	0.1uF	80/-20%	50V
C24	2090104012	CERAMIC	0.1uF	80/-20%	50V
C25	2090104012	CERAMIC	0.1uF	80/-20%	50V
C26	2090104012	CERAMIC	0.1uF	80/-20%	50V
C27	2090104012	CERAMIC	0.1uF	80/-20%	50V
C28	2230220045	ELECTROLYTIC	22uF	20%	16V
C41	2090104012	CERAMIC	0.1uF	80/-20%	50V
C42	2090104012	CERAMIC	0.1uF	80/-20%	50V
C43	2090104012	CERAMIC	0.1uF	80/-20%	50V
C44	2230220045	ELECTROLYTIC	22uF	20%	16V
C45	2230101047	ELECTROLYTIC	100uF	20%	16V
C46	2230220045	ELECTROLYTIC	22uF	20%	16V
C47	2090104012	CERAMIC	0.1uF	80/-20%	50V
C48	2090104012	CERAMIC	0.1uF	80/-20%	50V
C81	2090104012	CERAMIC	0.1uF	80/-20%	50V
C82	2090104012	CERAMIC	0.1uF	80/-20%	50V
C83	2090104012	CERAMIC	0.1uF	80/-20%	50V
C84	2090104012	CERAMIC	0.1uF	80/-20%	50V
C85	2230220045	ELECTROLYTIC	22uF	20%	16V
C101	2090104012	CERAMIC	0.1uF	80/-20%	50V
C102	2090104012	CERAMIC	0.1uF	80/-20%	50V
C103	2090104012	CERAMIC	0.1uF	80/-20%	50V
C104	2090104012	CERAMIC	0.1uF	80/-20%	50V
C105	2090104012	CERAMIC	0.1uF	80/-20%	50V
C106	2230101047	ELECTROLYTIC	100uF	20%	16V
C121	2090104012	CERAMIC	0.1uF	80/-20%	50V
C122	2090104012	CERAMIC	0.1uF	80/-20%	50V
C124	2090104012	CERAMIC	0.1uF	80/-20%	50V

C125	2510101001	CERAMIC	100pF	5%	50V
C126	2090104012	CERAMIC	0.1uF	80/-20%	50V
C127	2140102002	PLASTIC FILM	1000pF	5%	50V
C141	2090104012	CERAMIC	0.1uF	80/-20%	50V
C142	2090104012	CERAMIC	0.1uF	80/-20%	50V
C161	2090104012	CERAMIC	0.1uF	80/-20%	50V
C162	2090104012	CERAMIC	0.1uF	80/-20%	50V
C163	2090104012	CERAMIC	0.1uF	80/-20%	50V
C164	2090104012	CERAMIC	0.1uF	80/-20%	50V
C165	2090104012	CERAMIC	0.1uF	80/-20%	50V
C201	2090104012	CERAMIC	0.1uF	80/-20%	50V
C202	2090104012	CERAMIC	0.1uF	80/-20%	50V
C203	2090104012	CERAMIC	0.1uF	80/-20%	50V
C204	2090104012	CERAMIC	0.1uF	80/-20%	50V
C205	2090104012	CERAMIC	0.1uF	80/-20%	50V
C206	2090104012	CERAMIC	0.1uF	80/-20%	50V
C207	2090104012	CERAMIC	0.1uF	80/-20%	50V
C208	2090104012	CERAMIC	0.1uF	80/-20%	50V
C221	2090104012	CERAMIC	0.1uF	80/-20%	50V
C222	2090104012	CERAMIC	0.1uF	80/-20%	50V
C223	2090104012	CERAMIC	0.1uF	80/-20%	50V
C224	2090104012	CERAMIC	0.1uF	80/-20%	50V
C225	2090104012	CERAMIC	0.1uF	80/-20%	50V
C226	2090104012	CERAMIC	0.1uF	80/-20%	50V
C228	2090104012	CERAMIC	0.1uF	80/-20%	50V
C229	2200561004	PLASTIC FILM	560pF	5%	100V
C241	2090104012	CERAMIC	0.1uF	80/-20%	50V
C242	2090104012	CERAMIC	0.1uF	80/-20%	50V
C243	2090104012	CERAMIC	0.1uF	80/-20%	50V
C244	2090104012	CERAMIC	0.1uF	80/-20%	50V
C245	2090104012	CERAMIC	0.1uF	80/-20%	50V
C246	2090104012	CERAMIC	0.1uF	80/-20%	50V
C247	2090104012	CERAMIC	0.1uF	80/-20%	50V
C248	2090104012	CERAMIC	0.1uF	80/-20%	50V
C249	2090104012	CERAMIC	0.1uF	80/-20%	50V
C250	2090104012	CERAMIC	0.1uF	80/-20%	50V
C261	2090104012	CERAMIC	0.1uF	80/-20%	50V
C262	2090104012	CERAMIC	0.1uF	80/-20%	50V
C263	2090104012	CERAMIC	0.1uF	80/-20%	50V
C264	2090104012	CERAMIC	0.1uF	80/-20%	50V
C265	2090104012	CERAMIC	0.1uF	80/-20%	50V
C266	2090104012	CERAMIC	0.1uF	80/-20%	50V
C267	2510151006	CERAMIC	150pF	5%	50V
C268	2510151006	CERAMIC	150pF	5%	50V
C269	2510101001	CERAMIC	100pF	5%	50V
C281	2090104012	CERAMIC	0.1uF	80/-20%	50V
C282	2090104012	CERAMIC	0.1uF	80/-20%	50V
C283	2090104012	CERAMIC	0.1uF	80/-20%	50V
C284	2090104012	CERAMIC	0.1uF	80/-20%	50V
C285	2090104012	CERAMIC	0.1uF	80/-20%	50V
C286	2090104012	CERAMIC	0.1uF	80/-20%	50V
C287	2090104012	CERAMIC	0.1uF	80/-20%	50V
C300	2090104012	CERAMIC	0.1uF	80/-20%	50V
C301	2090104012	CERAMIC	0.1uF	80/-20%	50V
C302	2090104012	CERAMIC	0.1uF	80/-20%	50V
C303	2090104012	CERAMIC	0.1uF	80/-20%	50V
C320	2090104012	CERAMIC	0.1uF	80/-20%	50V

-TRANSISTORS-				
Q21	3011015012	PNP	2SA1015-Y	
Q22	3031815018	NPN	2SC1815-Y	
Q141	3031815018	NPN	2SC1815-Y	
-DIODES-				
D21	3120096008	ZENER	RD2.4ESAB2	2.4V
D22	3110110009	DETECTOR	GMB01	
D23	3110110009	DETECTOR	GMB01	
D141	3110110009	DETECTOR	GMB01	
D142	3110110009	DETECTOR	GMB01	
D221	3110110009	DETECTOR	GMB01	
-INTEGRATED CIRCUITS-				
CT-5532-IC1	3420002997	HS CMOS	74HC02	
IC1	3360000003	CPU	TMP84C011AF-6	
IC2	3205900009	SYSTEM RESET	TL7705CP-B	
IC22	3401306999	EPROM	27C512-200	
IC23	3401010998	SRAM	32KX8-150	
IC24	3420010006	CMOS	TC74HC10P	
IC25	3420032006	CMOS	TC74HC32P	
IC26	3420032006	CMOS	TC74HC32P	
IC41	3420138011	HS CMOS	HD74HC138P	
IC42	3420138011	HS CMOS	HD74HC138P	
IC43	3420000003	CMOS	TC74HC00P	
IC44	3420138011	HS CMOS	HD74HC138P	
IC45	3420138011	HS CMOS	HD74HC138P	
IC81	3420164012	HS CMOS	HD74HC164P	
IC82	3420000003	CMOS	TC74HC00P	
IC83	3420245012	HS CMOS	HD74HC245P	
IC84	3420125012	HS CMOS	HD74HC125P	
IC101	3420574011	HS CMOS	HD74HC574P	
IC102	3420574011	HS CMOS	HD74HC574P	
IC103	3420574011	HS CMOS	HD74HC574P	
IC104	3420574011	HS CMOS	HD74HC574P	
IC105	3420574011	HS CMOS	HD74HC574P	
IC121	3420112013	HS CMOS	HD74HC112P	
IC122	3260374006	TTL	SN74LS374N	
IC124	3260019006	TTL	SN74LS19N	
IC125	3260008991	TTL	74LS08	
IC141	3420112013	HS CMOS	HD74HC112P	
IC161	3420574011	HS CMOS	HD74HC574P	
IC162	3420574011	HS CMOS	HD74HC574P	
IC163	3420574011	HS CMOS	HD74HC574P	
IC164	3420574011	HS CMOS	HD74HC574P	
IC165	3420574011	HS CMOS	HD74HC574P	
IC201	3401306999	EPROM	27C512-200	
IC202	3420139004	CMOS	TC74HC139P	
IC203	3420574011	HS CMOS	HD74HC574P	
IC204	3420574011	HS CMOS	HD74HC574P	
IC205	3420574011	HS CMOS	HD74HC574P	
IC206	3420574011	HS CMOS	HD74HC574P	
IC207	3430040011	HS CMOS	HD74HC4040P	
IC208	3420032006	CMOS	TC74HC32P	
IC221	3420423120	CMOS	MM74HC423N	
IC222	3430040011	HS CMOS	HD74HC4040P	
IC223	3430040011	HS CMOS	HD74HC4040P	
IC224	3401209001	BP ROM	AM27S21APC	

IC225	3401306999	EPROM	27C512-200
IC226	3420574011	HS CMOS	HD74HC574P
IC228	3420125012	HS CMOS	HD74HC125P
IC241	3420008999	HS CMOS	74HC08
IC242	3420008999	HS CMOS	74HC08
IC243	3420011008	CMOS	TC74HC11P
IC244	3420011008	CMOS	TC74HC11P
IC245	3420011008	CMOS	TC74HC11P
IC246	3420008999	HS CMOS	74HC08
IC247	3420004001	CMOS	TC74HC04P
IC248	3420008999	HS CMOS	74HC08
IC249	3420032006	CMOS	TC74HC32P
IC261	3420032006	CMOS	TC74HC32P
IC262	3420008999	HS CMOS	74HC08
IC263	3420086018	HS CMOS	HD74HC86P
IC264	3420008999	HS CMOS	74HC08
IC265	3420008999	HS CMOS	74HC08
IC266	3420008999	HS CMOS	74HC08
IC282	3420574011	HS CMOS	HD74HC574P
IC283	3420245012	HS CMOS	HD74HC245P
IC284	3430040011	HS CMOS	HD74HC4040P
IC285	3420125012	HS CMOS	HD74HC125P
IC286	3420086018	HS CMOS	HD74HC86P
IC287	3290000006	TTL	74F00 PC
IC300	3420574011	HS CMOS	HD74HC574P
IC301	3420574011	HS CMOS	HD74HC574P
IC302	3420138011	HS CMOS	HD74HC138P
IC303	3420032006	CMOS	TC74HC32P
IC320	3402307007	TVDC	MB88322 (DIP)
-COILS-			
IC281	3993014001	ACTIVE DELAY LINE	ADL-100SH
-CONNECTORS-			
TP201	4310152000	CONNECTOR	SML 010
ICS22	4323042008	IC SOCKET	110-99-628
ICS122	4323047008	IC SOCKET	110-99-320
ICS125	4323045004	SOCKET	110-99-314
ICS124	4323045004	SOCKET	110-99-314
ICS201	4323042008	IC SOCKET	110-99-628
ICS224	4323044002	SOCKET	110-99-316
ICS225	4323042008	IC SOCKET	110-99-628
T-5332	4323051100	SIP SOCKET	0Y-004(20P)
-MISCELLANEOUS-			
BA21	4362011009	BATTERY	3-51FTA
P1	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A
P2	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A
P41	4312111008		609-5027
P42	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A
P43	4413004010	XH CONNECTOR TOP ENTRY	B4B-XH-A
P81	4317364007	HKP CONNECTOR	HKP-14M1
P101	4413802009	FFC CONNECTOR	5597-30CPB
P102	4413802009	FFC CONNECTOR	5597-30CPB
P122	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A
P181	4413802009	FFC CONNECTOR	5597-30CPB
P182	4413802009	FFC CONNECTOR	5597-30CPB
P183	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB

P261	4413003018	XH CONNECTOR TOP ENTRY	B3B-XH-A
P301	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB
SP141	4340004006	BUZZER	EAF-14R06C
TP201	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP202	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP221	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP223	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP261	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP262	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP263	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP281	4384003006	TP TERMINAL	LC-2-S(ORANGE)
X1	3510050009	NC-18C 8.000MHz	

***** GENLOCK BOARD T-5204 *****

-RESISTORS-

R200	1000153004	CARBON FILM	15K OHM	5%	1/6W
R201	1000105003	CARBON FILM	1M OHM	5%	1/6W
R202	1000103009	CARBON FILM	10K OHM	5%	1/6W
R203	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R204	1000102007	CARBON FILM	1K OHM	5%	1/6W
R205	1000101005	CARBON FILM	100 OHM	5%	1/6W
R206	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R208	1000105003	CARBON FILM	1M OHM	5%	1/6W
R210	1000101005	CARBON FILM	100 OHM	5%	1/6W
R211	1000102007	CARBON FILM	1K OHM	5%	1/6W
R213	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R214	1000102007	CARBON FILM	1K OHM	5%	1/6W
R215	1010102004	CARBON FILM	1K OHM	5%	1/4W
R216	1000471008	CARBON FILM	470 OHM	5%	1/6W
R217	1000105003	CARBON FILM	1M OHM	5%	1/6W
R218	1000101005	CARBON FILM	100 OHM	5%	1/6W
R219	1000101005	CARBON FILM	100 OHM	5%	1/6W
R300	1000103009	CARBON FILM	10K OHM	5%	1/6W
R301	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R302	1000471008	CARBON FILM	470 OHM	5%	1/6W
R303	1000101005	CARBON FILM	100 OHM	5%	1/6W
R304	1000101005	CARBON FILM	100 OHM	5%	1/6W
R305	1000102007	CARBON FILM	1K OHM	5%	1/6W
R306	1000102007	CARBON FILM	1K OHM	5%	1/6W
R307	1000102007	CARBON FILM	1K OHM	5%	1/6W
R308	1000101005	CARBON FILM	100 OHM	5%	1/6W
R309	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R310	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R311	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R312	1000101005	CARBON FILM	100 OHM	5%	1/6W
R313	1000103009	CARBON FILM	10K OHM	5%	1/6W
R314	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R315	1000104001	CARBON FILM	100K OHM	5%	1/6W
R316	1000103009	CARBON FILM	10K OHM	5%	1/6W
R317	1000103009	CARBON FILM	10K OHM	5%	1/6W
R318	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R319	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R320	1000103009	CARBON FILM	10K OHM	5%	1/6W
R321	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R322	1000103009	CARBON FILM	10K OHM	5%	1/6W
R323	1000222007	CARBON FILM	2.2K OHM	5%	1/6W

R324	1000104001	CARBON FILM	100K OHM	5%	1/6W
R325	1000103009	CARBON FILM	10K OHM	5%	1/6W
R326	1000102007	CARBON FILM	1K OHM	5%	1/6W
R327	1000333006	CARBON FILM	33K OHM	5%	1/6W
R328	1000223009	CARBON FILM	22K OHM	5%	1/6W
R329	1000105003	CARBON FILM	1M OHM	5%	1/6W
R330	1000393004	CARBON FILM	39K OHM	5%	1/6W
R331	1000153004	CARBON FILM	15K OHM	5%	1/6W
R332	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R333	1000220003	CARBON FILM	22 OHM	5%	1/6W
R334	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R335	1000103009	CARBON FILM	10K OHM	5%	1/6W
R336	1000104001	CARBON FILM	100K OHM	5%	1/6W
R337	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R338	1000225003	CARBON FILM	2.2M OHM	5%	1/6W
R339	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R400	1000154006	CARBON FILM	150K OHM	5%	1/6W
R401	1000684005	CARBON FILM	680K OHM	5%	1/6W
R402	1464302003	METAL FILM	43K OHM	1%	1/6W
R403	1000102007	CARBON FILM	1K OHM	5%	1/6W
R404	1000103009	CARBON FILM	10K OHM	5%	1/6W
R405	1000103009	CARBON FILM	10K OHM	5%	1/6W
R406	1000123005	CARBON FILM	12K OHM	5%	1/6W
R407	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R408	1000103009	CARBON FILM	10K OHM	5%	1/6W
R409	1000123005	CARBON FILM	12K OHM	5%	1/6W
R410	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R411	1000103009	CARBON FILM	10K OHM	5%	1/6W
R413	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R414	1000223009	CARBON FILM	22K OHM	5%	1/6W
R415	1000123005	CARBON FILM	12K OHM	5%	1/6W
R416	1000474004	CARBON FILM	470K OHM	5%	1/6W
R421	1000104001	CARBON FILM	100K OHM	5%	1/6W
R422	1000104001	CARBON FILM	100K OHM	5%	1/6W
R423	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R424	1000334008	CARBON FILM	330K OHM	5%	1/6W
R425	1000103009	CARBON FILM	10K OHM	5%	1/6W
R426	1000474004	CARBON FILM	470K OHM	5%	1/6W
R427	1000104001	CARBON FILM	100K OHM	5%	1/6W
R428	1000104001	CARBON FILM	100K OHM	5%	1/6W
R429	1000102007	CARBON FILM	1K OHM	5%	1/6W
R430	1000473002	CARBON FILM	47K OHM	5%	1/6W
R431	1000102007	CARBON FILM	1K OHM	5%	1/6W
R432	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R433	1000102007	CARBON FILM	1K OHM	5%	1/6W
R434	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R500	1000104001	CARBON FILM	100K OHM	5%	1/6W
R501	1000104001	CARBON FILM	100k OHM	5%	1/6W
R502	1000223009	CARBON FILM	22K OHM	5%	1/6W
R503	1000473002	CARBON FILM	47K OHM	5%	1/6W
R505	1000102007	CARBON FILM	1K OHM	5%	1/6W
R506	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R507	1000102007	CARBON FILM	1K OHM	5%	1/6W
R508	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R509	1000471008	CARBON FILM	470 OHM	5%	1/6W
R510	1000104001	CARBON FILM	100K OHM	5%	1/6W
R511	1000223009	CARBON FILM	22K OHM	5%	1/6W
R512	1000473002	CARBON FILM	47K OHM	5%	1/6W

R513	1000102007	CARBON FILM	1K OHM	5%	1/6W
R514	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R515	1000102007	CARBON FILM	1K OHM	5%	1/6W
R517	1000104001	CARBON FILM	100K OHM	5%	1/6W
R518	1000104001	CARBON FILM	100K OHM	5%	1/6W
R519	1000223009	CARBON FILM	22K OHM	5%	1/6W
R520	1000473002	CARBON FILM	47K OHM	5%	1/6W
R521	1000102007	CARBON FILM	1K OHM	5%	1/6W
R522	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R523	1000102007	CARBON FILM	1K OHM	5%	1/6W
R524	1462401003	METAL FILM	2.4K OHM	1%	1/6W
R525	1000471008	CARBON FILM	470 OHM	5%	1/6W
R526	1000104001	CARBON FILM	100K OHM	5%	1/6W
R527	1000223009	CARBON FILM	22K OHM	5%	1/6W
R528	1000473002	CARBON FILM	47K OHM	5%	1/6W
R529	1000102007	CARBON FILM	1K OHM	5%	1/6W
R530	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R531	1000102007	CARBON FILM	1K OHM	5%	1/6W
R532	1000104001	CARBON FILM	100K OHM	5%	1/6W
R602	1000000009	CARBON FILM	0 OHM		
R603	1000000009	CARBON FILM	0 OHM		
R604	1000103009	CARBON FILM	10K OHM	5%	1/6W
R605	1000221005	CARBON FILM	220 OHM	5%	1/6W
R606	1000221005	CARBON FILM	220 OHM	5%	1/6W
R700	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R701	1000102007	CARBON FILM	1K OHM	5%	1/6W
R702	1000272002	CARBON FILM	2.7K OHM	5%	1/6W
R703	1000102007	CARBON FILM	1K OHM	5%	1/6W
R704	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R705	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R706	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R707	1000105003	CARBON FILM	1M OHM	5%	1/6W
R708	1000105003	CARBON FILM	1M OHM	5%	1/6W
R709	1000101005	CARBON FILM	100 OHM	5%	1/6W
R710	1580331008	METAL OXIDE	330 OHM	5%	1W
R711	1000101005	CARBON FILM	100 OHM	5%	1/6W
R712	1000101005	CARBON FILM	100 OHM	5%	1/6W
R713	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R714	1000470006	CARBON FILM	47 OHM	5%	1/6W
R715	1467509003	METAL FILM	75 OHM	1%	1/6W
R716	1000473002	CARBON FILM	47K OHM	5%	1/6W
R801	1000103009	CARBON FILM	10K OHM	5%	1/6W
R802	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R803	1000102007	CARBON FILM	1K OHM	5%	1/6W
R804	1000102007	CARBON FILM	1K OHM	5%	1/6W
R805	1000102007	CARBON FILM	1K OHM	5%	1/6W
R806	1000122003	CARBON FILM	1.2K OHM	5%	1/6W
R807	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R808	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R809	1000101005	CARBON FILM	100 OHM	5%	1/6W
R810	1000681009	CARBON FILM	680 OHM	5%	1/6W
R811	1000122003	CARBON FILM	1.2K OHM	5%	1/6W
R812	1467509003	METAL FILM	75 OHM	1%	1/6W
R813	1467509003	METAL FILM	75 OHM	1%	1/6W
R814	1000123005	CARBON FILM	12K OHM	5%	1/6W
R815	1464700005	METAL FILM	470 OHM	1%	1/6W
R816	1000103009	CARBON FILM	10K OHM	5%	1/6W
R817	1461102007	METAL FILM	11K OHM	1%	1/6W

R818	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R819	1000103009	CARBON FILM	10K OHM	5%	1/6W
R901	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R902	1000102007	CARBON FILM	1K OHM	5%	1/6W
R903	1461102007	METAL FILM	11K OHM	1%	1/6W
R904	1461102007	METAL FILM	11K OHM	1%	1/6W
R905	1000104001	CARBON FILM	100K OHM	5%	1/6W
R906	1000104001	CARBON FILM	100K OHM	5%	1/6W
R907	1461001001	METAL FILM	1K OHM	1%	1/6W
R908	1461001001	METAL FILM	1K OHM	1%	1/6W
R909	1000123005	CARBON FILM	12K OHM	5%	1/6W
R910	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R911	1000102007	CARBON FILM	1K OHM	5%	1/6W
R912	1461001001	METAL FILM	1K OHM	1%	1/6W
R913	1461001001	METAL FILM	1K OHM	1%	1/6W
R914	1000101005	CARBON FILM	100 OHM	5%	1/6W
R915	1000101005	CARBON FILM	100 OHM	5%	1/6W
R916	1000101005	CARBON FILM	100 OHM	5%	1/6W
R917	1000101005	CARBON FILM	100 OHM	5%	1/6W
R918	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R919	1000471008	CARBON FILM	470 OHM	5%	1/6W
R920	1000101005	CARBON FILM	100 OHM	5%	1/6W
R921	1000101005	CARBON FILM	100 OHM	5%	1/6W
R922	1000102007	CARBON FILM	1K OHM	5%	1/6W
R923	1000102007	CARBON FILM	1K OHM	5%	1/6W
R924	1000102007	CARBON FILM	1K OHM	5%	1/6W
R925	1000471008	CARBON FILM	470 OHM	5%	1/6W
R926	1000102007	CARBON FILM	1K OHM	5%	1/6W
R927	1000271000	CARBON FILM	270 OHM	5%	1/6W
R929	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R930	1000681009	CARBON FILM	680 OHM	5%	1/6W
R931	1000471008	CARBON FILM	470 OHM	5%	1/6W
R932	1000101005	CARBON FILM	100 OHM	5%	1/6W
R933	1000101005	CARBON FILM	100 OHM	5%	1/6W
R934	1000101005	CARBON FILM	100 OHM	5%	1/6W
R935	1000103009	CARBON FILM	10K OHM	5%	1/6W
R936	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R937	1000102007	CARBON FILM	1K OHM	5%	1/6W
R938	1000821009	CARBON FILM	820 OHM	5%	1/6W
R939	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R941	1000105003	CARBON FILM	1M OHM	5%	1/6W
R943	1000103009	CARBON FILM	10K OHM	5%	1/6W
R944	1000102007	CARBON FILM	1K OHM	5%	1/6W
R945	1000101005	CARBON FILM	100 OHM	5%	1/6W
R946	1000105003	CARBON FILM	1M OHM	5%	1/6W
R947	1000102007	CARBON FILM	1K OHM	5%	1/6W
R948	1000105003	CARBON FILM	1M OHM	5%	1/6W
R949	1000103009	CARBON FILM	10K OHM	5%	1/6W
R950	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R951	1000104001	CARBON FILM	100K OHM	5%	1/6W
RA701	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA702	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
-VARIABLE RESISTORS-					
VR300	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR301	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR701	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR801	1711004079	METAL GLAZE	10K OHM	20%	1/3W

VR802	1711004051	METAL GLAZE	2K OHM	20%	1/3W	
VR803	1711004060	METAL GLAZE	3K OHM	20%	1/3W	
VR901	1711004079	METAL GLAZE	10K OHM	20%	1/3W	
VR902	1711004125	METAL GLAZE	5K OHM	20%	1/3W	
VR904	1711004134	METAL GLAZE	200K OHM	20%	1/3W	
VR905	1711004134	METAL GLAZE	200K OHM	20%	1/3W	
-CAPACITORS-						
C200	2610104005	PLASTIC FILM	0.1uF	10%	63V	
C201	2520220006	CERAMIC	22pF	5%	500V	
C202	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C203	2520220006	CERAMIC	22pF	5%	500V	
C204	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C207	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C208	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C300	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C301	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C302	2010103014	CERAMIC	0.01uF	80/-20%	50V	
C303	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C304	2140473007	PLASTIC FILM	0.047uF	5%	50V	
C305	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C307	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C308	2610104005	PLASTIC FILM	0.1uF	10%	63V	
C309	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C310	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C311	2610474008	PLASTIC FILM	0.47uF	10%	63V	
C312	2140222011	PLASTIC FILM	2200pF	5%	50V	
C313	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C314	2510101001	CERAMIC	100pF	5%	50V	
C401	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C402	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C404	2140152007	PLASTIC FILM	1500pF	5%	50V	
C405	2200561004	PLASTIC FILM	560pF	5%	100V	
C406	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C407	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C408	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C409	2610474008	PLASTIC FILM	0.47uF	10%	63V	
C410	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C412	2140332009	PLASTIC FILM	3300pF	5%	50V	
C414	2510101001	CERAMIC	100pF	5%	50V	
C415	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C416	2440150007	ELECTROLYTIC	15uF	20%	16V	
C417	2323220044	ELECTROLYTIC	22uF	20%	25V	BP
C418	2230470048	ELECTROLYTIC	47uF	20%	16V	
C419	2510101001	CERAMIC	100pF	5%	50V	
C420	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C421	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C422	2090104012	CERAMIC	0.1uF	80/-20%	50V	
C500	2010102012	CERAMIC	1000pF	10%	50V	
C502	2510221001	CERAMIC	220pF	5%	50V	
C503	2510221001	CERAMIC	220pF	5%	50V	
C504	2010103014	CERAMIC	0.01uF	80/-20%	50V	
C505	2010103014	CERAMIC	0.01uF	80/-20%	50V	
C507	2010102012	CERAMIC	1000pF	10%	50V	
C509	2510221001	CERAMIC	220pF	5%	50V	
C510	2510121007	CERAMIC	120pF	5%	50V	
C511	2010103014	CERAMIC	0.01uF	80/-20%	50V	
C512	2010103014	CERAMIC	0.01uF	80/-20%	50V	

C513	2010102012	CERAMIC	1000pF	10%	50V
C515	2510221001	CERAMIC	220pF	5%	50V
C516	2110271004	MICA	270pF	10%	50V
C517	2010103014	CERAMIC	0.01uF	80/-20%	50V
C518	2010103014	CERAMIC	0.01uF	80/-20%	50V
C520	2010102012	CERAMIC	1000pF	10%	50V
C522	2510151006	CERAMIC	150pF	5%	50V
C523	2510121007	CERAMIC	120pF	5%	50V
C524	2010103014	CERAMIC	0.01uF	80/-20%	50V
C525	2010103014	CERAMIC	0.01uF	80/-20%	50V
C526	2510101001	CERAMIC	100pF	5%	50V
C600	2090104012	CERAMIC	0.1uF	80/-20%	50V
C601	2090104012	CERAMIC	0.1uF	80/-20%	50V
C602	2090104012	CERAMIC	0.1uF	80/-20%	50V
C603	2090104012	CERAMIC	0.1uF	80/-20%	50V
C604	2220101040	ELECTROLYTIC	100uF	20%	10V
C605	2240101044	ELECTROLYTIC	100uF	20%	25V
C606	2240101044	ELECTROLYTIC	100uF	20%	25V
C607	2510101001	CERAMIC	100pF	5%	50V
C608	2510101001	CERAMIC	100pF	5%	50V
C609	2090104012	CERAMIC	0.1uF	80/-20%	50V
C610	2090104012	CERAMIC	0.1uF	80/-20%	50V
C700	2090104012	CERAMIC	0.1uF	80/-20%	50V
C705	2090104012	CERAMIC	0.1uF	80/-20%	50V
C706	2090104012	CERAMIC	0.1uF	80/-20%	50V
C801	2520030001	CERAMIC	3pF	±0.5PF	500V
C803	2520560000	CERAMIC	56pF	5%	500V
C808	2090104012	CERAMIC	0.1uF	80/-20%	50V
C809	2090104012	CERAMIC	0.1uF	80/-20%	50V
C810	2090104012	CERAMIC	0.1uF	80/-20%	50V
C811	2090104012	CERAMIC	0.1uF	80/-20%	50V
C812	2090104012	CERAMIC	0.1uF	80/-20%	50V
C813	2520100006	CERAMIC	10pF	5%	500V
C814	2510101001	CERAMIC	100pF	5%	50V
C815	2520470009	CERAMIC	47pF	5%	500V
C816	2520220006	CERAMIC	22pF	5%	500V
C817	2520020008	CERAMIC	20pF	5%	500V
C818	2520470009	CERAMIC	47pF	5%	500V
C901	2090104012	CERAMIC	0.1uF	80/-20%	50V
C902	2090104012	CERAMIC	0.1uF	80/-20%	50V
C903	2090104012	CERAMIC	0.1uF	80/-20%	50V
C904	2090104012	CERAMIC	0.1uF	80/-20%	50V
C905	2090104012	CERAMIC	0.1uF	80/-20%	50V
C906	2520220006	CERAMIC	22pF	5%	500V
C908	2520220006	CERAMIC	22pF	5%	500V
C910	2090104012	CERAMIC	0.1uF	80/-20%	50V
C911	2090104012	CERAMIC	0.1uF	80/-20%	50V
C912	2520820000	CERAMIC	82pF	5%	500V
C913	2520390001	CERAMIC	39pF	5%	500V
C914	2520820000	CERAMIC	82pF	5%	500V
C915	2520390001	CERAMIC	39pF	5%	500V
C916	2520220006	CERAMIC	22pF	5%	500V
C917	2090104012	CERAMIC	0.1uF	80/-20%	50V
C918	2090104012	CERAMIC	0.1uF	80/-20%	50V
C919	2090104012	CERAMIC	0.1uF	80/-20%	50V
C920	2090104012	CERAMIC	0.1uF	80/-20%	50V

-VARIABLE CAPACITORS-

VC500	2910066007	CERAMIC	2222 808-11409
VC501	2910066007	CERAMIC	2222 808-11409
VC502	2910066007	CERAMIC	2222 808-11409
VC503	2910066007	CERAMIC	2222 808-11409
VC700	2910066007	CERAMIC	2222 808-11409
VC701	2910066007	CERAMIC	2222 808-11409
VC801	2910066007	CERAMIC	2222 808-11409
VC901	2910066007	CERAMIC	2222 808-11409
-TRANSISTORS-			
Q200	3031815018	NPN	2SC1815-Y
Q201	3031815018	NPN	2SC1815-Y
Q203	3032671007	NPN	2SC2671
Q204	3032671007	NPN	2SC2671
Q205	3031815018	NPN	2SC1815-Y
Q206	3030752014	NPN	2SC752(G)-TM-Y
Q207	3050030001	FET	2SK30A-GR
Q300	3011015012	PNP	2SA1015-Y
Q301	3011015012	PNP	2SA1015-Y
Q302	3030752014	NPN	2SC752(G)-TM-Y
Q303	3031815018	NPN	2SC1815-Y
Q304	3031815018	NPN	2SC1815-Y
Q305	3031815018	NPN	2SC1815-Y
Q306	3031815018	NPN	2SC1815-Y
Q307	3031815018	NPN	2SC1815-Y
Q308	3011015012	PNP	2SA1015-Y
Q309	3011015012	PNP	2SA1015-Y
Q310	3030752014	NPN	2SC752(G)-TM-Y
Q400	3031815018	NPN	2SC1815-Y
Q401	3031815018	NPN	2SC1815-Y
Q402	3031815018	NPN	2SC1815-Y
Q403	3031815018	NPN	2SC1815-Y
Q404	3031815018	NPN	2SC1815-Y
Q405	3011015021	PNP	2SA1015-GR
Q406	3011015012	PNP	2SA1015-Y
Q407	3031815018	NPN	2SC1815-Y
Q408	3031815018	NPN	2SC1815-Y
Q500	3031815018	NPN	2SC1815-Y
Q501	3031815018	NPN	2SC1815-Y
Q502	3031815018	NPN	2SC1815-Y
Q503	3031815018	NPN	2SC1815-Y
Q504	3030752014	NPN	2SC752(G)-TM-Y
Q505	3031815018	NPN	2SC1815-Y
Q506	3031815018	NPN	2SC1815-Y
Q507	3031815018	NPN	2SC1815-Y
Q508	3031815018	NPN	2SC1815-Y
Q509	3030752014	NPN	2SC752(G)-TM-Y
Q700	3030752014	NPN	2SC752(G)-TM-Y
Q701	3030752014	NPN	2SC752(G)-TM-Y
Q702	3031815018	NPN	2SC1815-Y
Q703	3031815018	NPN	2SC1815-Y
Q704	3033419012	NPN	2SC3419-Y
Q705	3011015012	PNP	2SA1015-Y
Q801	3011015012	PNP	2SA1015-Y
Q802	3011015012	PNP	2SA1015-Y
Q803	3031815018	NPN	2SC1815-Y
Q804	3010781008	PNP	2SA781
Q805	3031815018	NPN	2SC1815-Y

Q806	3031815018	NPN	2SC1815-Y
Q901	3031815018	NPN	2SC1815-Y
Q902	3010781008	PNP	2SA781
Q903	3010781008	PNP	2SA781
Q904	3010781008	PNP	2SA781
Q905	3031815018	NPN	2SC1815-Y
Q906	3031815018	NPN	2SC1815-Y
Q908	3030752014	NPN	2SC752(G)-TM-Y
Q909	3030752014	NPN	2SC752(G)-TM-Y
Q910	3030752014	NPN	2SC752(G)-TM-Y
Q911	3031815018	NPN	2SC1815-Y
Q912	3031815018	NPN	2SC1815-Y

-DIODES-

D300	3110110009	DETECTOR	GMB01	
D304	3110071005	DETECTOR	1SS97	
D400	3110110009	DETECTOR	GMB01	
D401	3110110009	DETECTOR	GMB01	
D402	3120067001	ZENER	RD3.0EB	3V
D403	3120029003	ZENER	RD9.1EB	9.1V
D500	3140030002	VARICAP	SVC 203	
D501	3140030002	VARICAP	SVC 203	
D502	3140030002	VARICAP	SVC 203	
D503	3140030002	VARICAP	SVC 203	
D504	3110110009	DETECTOR	GMB01	
D506	3110110009	DETECTOR	GMB01	
D507	3110110009	DETECTOR	GMB01	
D508	3110110009	DETECTOR	GMB01	
D509	3110110009	DETECTOR	GMB01	
D510	3110110009	DETECTOR	GMB01	
D511	3110110009	DETECTOR	GMB01	
D512	3110110009	DETECTOR	GMB01	
D901	3110110009	DETECTOR	GMB01	
D902	3110110009	DETECTOR	GMB01	
D903	3110110009	DETECTOR	GMB01	
D904	3110110009	DETECTOR	GMB01	
D905	3110110009	DETECTOR	GMB01	
D906	3110110009	DETECTOR	GMB01	
D907	3110110009	DETECTOR	GMB01	
D908	3110110009	DETECTOR	GMB01	

-INTEGRATED CIRCUITS-

IC300	3205500012	BAL MODULATOR	NJM1496D
IC301	3201113002	DUAL OP AMP	uPC812C
IC302	3202103005	DUAL COMPARATOR	CA3290E
IC400	3207300007	VIDEO SYNC SEP	LM1881N
IC401	3260221991	TTL	74LS221
IC402	3404300005	PHASE COMPARATOR	CX23065
IC403	3201113002	DUAL OP AMP	uPC812C
IC405	3201113002	DUAL OP AMP	uPC812C
IC406	3202007009	SINGLE COMPARATOR	uPC71D
IC407	3420123128	CMOS	MM74HC123N
IC600	3420008999	HS CMOS	74HC08
IC601	3364200014	SOP SYNC GEN	CX-1217M
IC602	3420367126	CMOS	MM74HC367N
IC603	3420004991	HS CMOS	74HC04
IC604	3420393998	HS CMOS	74HC393
IC605	3420125993	HS CMOS	74HC125

IC700	3420240993	HS CMOS	74HC240
IC801	3420000993	HS CMOS	74HC00
IC901	3205500012	BAL MODULATOR	NJM1496D
IC902	3205500012	BAL MODULATOR	NJM1496D
-COILS-			
L200	3930470034	CHOKE COIL	47uH 10%
L700	3930470034	CHOKE COIL	47uH 10%
L801	3930470034	CHOKE COIL	47uH 10%
L802	3930270036	CHOKE COIL	27uH 10%
L803	3930120037	CHOKE COIL	LAL03NA 120K
L902	3900849001	COIL	L-849
L903	3900849001	COIL	L-849
L904	3900849001	COIL	L-849
L905	3900849001	COIL	L-849
L906	3900840003	COIL	L-840
L907	3930180035	CHOKE COIL	18uH 10%
K901	4080050016	RELAY	DS2E-S-DC5V AG232944
-CONNECTORS-			
J200	4310747001	CONNECTOR	BNC-080
J201	4310747001	CONNECTOR	BNC-080
J600	4310152000	CONNECTOR	SML 015
J601	4310152000	CONNECTOR	SML 015
J700	4310152000	CONNECTOR	SML 015
J701	4310152000	CONNECTOR	SML 015
J801	4310747001	CONNECTOR	BNC-080
J802	4310747001	CONNECTOR	BNC-080
-MISCELLANEOUS-			
P201	4413009010	XH CONNECTOR TOP ENTRY	B9B-XH-A
P600	4413005012	XH CONNECTOR TOP ENTRY	B5B-XH-A
P601	4413010015	XH CONNECTOR TOP ENTRY	B10B-XH-A
P602	4413010015	XH CONNECTOR TOP ENTRY	B10B-XH-A
P700	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB
TP200	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP201	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP300	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP301	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP302	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP303	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP500	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP501	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP502	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP503	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP504	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP600	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP601	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP602	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP603	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP604	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP605	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP606	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP607	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP608	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP801	4384003006	TP TERMINAL	LC-2-S(ORANGE)
X500	3500322009	CRYSTAL X-322A	NC-18B 14.31818MHz
X501	3500568001	CRISTAL X-568	NC-18C 14.1875MHz

X502	3500420009	CRYSTAL	X-420	NC-18C	3.579545MHz
X503	3500512004	CRYSTAL	X-512	HC-181V	17.734475MHz

***** ANALOG BOARD T-5202 *****

—RESISTORS—					
JP50	1000000009	CARBON FILM	0 OHM		
JP51	1000000009	CARBON FILM	0 OHM		
JP489	1000000009	CARBON FILM	0 OHM		
JP650	1000000009	CARBON FILM	0 OHM		
JP778	1000000009	CARBON FILM	0 OHM		
JP781	1000000009	CARBON FILM	0 OHM		
JP873	1000000009	CARBON FILM	0 OHM		
JP876	1000000009	CARBON FILM	0 OHM		
R3	1468201001	METAL FILM	8.2K OHM	1%	1/6W
R4	1465101009	METAL FILM	5.1K OHM	1%	1/6W
R10	1466802005	METAL FILM	68K OHM	1%	1/6W
R16	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R17	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R18	1466802005	METAL FILM	68K OHM	1%	1/6W
R22	1000561009	CARBON FILM	560 OHM	5%	1/6W
R24	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R25	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R26	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R27	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R28	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R29	1000103009	CARBON FILM	10K OHM	5%	1/6W
R30	1000103009	CARBON FILM	10K OHM	5%	1/6W
R50	1461002003	METAL FILM	10K OHM	1%	1/6W
R54	1461002003	METAL FILM	10K OHM	1%	1/6W
R100	1461102007	METAL FILM	11K OHM	1%	1/6W
R104	1461001001	METAL FILM	1K OHM	1%	1/6W
R105	1461001001	METAL FILM	1K OHM	1%	1/6W
R106	1461002003	METAL FILM	10K OHM	1%	1/6W
R350	1461302005	METAL FILM	13K OHM	1%	1/6W
R353	1461302005	METAL FILM	13K OHM	1%	1/6W
R356	1468201001	METAL FILM	8.2K OHM	1%	1/6W
R357	1463302007	METAL FILM	33K OHM	1%	1/6W
R360	1000102007	CARBON FILM	1K OHM	5%	1/6W
R361	1461001001	METAL FILM	1K OHM	1%	1/6W
R362	1461001001	METAL FILM	1K OHM	1%	1/6W
R367	1000103009	CARBON FILM	10K OHM	5%	1/6W
R368	1464700005	METAL FILM	470 OHM	1%	1/6W
R369	1461200007	METAL FILM	120 OHM	1%	1/6W
R370	1463901009	METAL FILM	3.9K OHM	1%	1/6W
R400	1000104001	CARBON FILM	100K OHM	5%	1/6W
R401	1461001001	METAL FILM	1K OHM	1%	1/6W
R402	1461001001	METAL FILM	1K OHM	1%	1/6W
R403	1000101005	CARBON FILM	100 OHM	5%	1/6W
R404	1000101005	CARBON FILM	100 OHM	5%	1/6W
R405	1000104001	CARBON FILM	100K OHM	5%	1/6W
R406	1461001001	METAL FILM	1K OHM	1%	1/6W
R407	1461001001	METAL FILM	1K OHM	1%	1/6W
R408	1000101005	CARBON FILM	100 OHM	5%	1/6W
R409	1000101005	CARBON FILM	100 OHM	5%	1/6W
R410	1464701007	METAL FILM	4.7K OHM	1%	1/6W
R411	1461001001	METAL FILM	1K OHM	1%	1/6W

R412	1464700005	METAL FILM	470 OHM	1%	1/6W
R413	1000102007	CARBON FILM	1K OHM	5%	1/6W
R414	1000101005	CARBON FILM	100 OHM	5%	1/6W
R415	1000101005	CARBON FILM	100 OHM	5%	1/6W
R416	1000221005	CARBON FILM	220 OHM	5%	1/6W
R417	1000221005	CARBON FILM	220 OHM	5%	1/6W
R418	1464701007	METAL FILM	4.7K OHM	1%	1/6W
R419	1000271000	CARBON FILM	270 OHM	5%	1/6W
R420	1000105003	CARBON FILM	1M OHM	5%	1/6W
R421	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R422	1464700005	METAL FILM	470 OHM	1%	1/6W
R423	1466800001	METAL FILM	680 OHM	1%	1/6W
R424	1000102007	CARBON FILM	1K OHM	5%	1/6W
R425	1000101005	CARBON FILM	100 OHM	5%	1/6W
R426	1000105003	CARBON FILM	1M OHM	5%	1/6W
R427	1000105003	CARBON FILM	1M OHM	5%	1/6W
R428	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R429	1000102007	CARBON FILM	1K OHM	5%	1/6W
R430	1000471008	CARBON FILM	470 OHM	5%	1/6W
R431	1000102007	CARBON FILM	1K OHM	5%	1/6W
R432	1463000001	METAL FILM	300 OHM	1%	1/6W
R434	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R435	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R436	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R437	1461501001	METAL FILM	1.5K OHM	1%	1/6W
R438	1000102007	CARBON FILM	1K OHM	5%	1/6W
R439	1000101005	CARBON FILM	100 OHM	5%	1/6W
R440	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R441	1000105003	CARBON FILM	1M OHM	5%	1/6W
R442	1000102007	CARBON FILM	1K OHM	5%	1/6W
R443	1000105003	CARBON FILM	1M OHM	5%	1/6W
R444	1000101005	CARBON FILM	100 OHM	5%	1/6W
R445	1000101005	CARBON FILM	100 OHM	5%	1/6W
R450	1000470006	CARBON FILM	47 OHM	5%	1/6W
R451	1465601009	METAL FILM	5.6K OHM	1%	1/6W
R452	1000474004	CARBON FILM	470K OHM	5%	1/6W
R453	1000105003	CARBON FILM	1M OHM	5%	1/6W
R454	1000221005	CARBON FILM	220 OHM	5%	1/6W
R480	1000221005	CARBON FILM	220 OHM	5%	1/6W
R481	1000102007	CARBON FILM	1K OHM	5%	1/6W
R482	1020821003	CARBON FILM	820 OHM	5%	1/2W
R483	1464300009	METAL FILM	430 OHM	1%	1/6W
R484	1461301003	METAL FILM	1.3K OHM	1%	1/6W
R485	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R486	1462702007	METAL FILM	27K OHM	1%	1/6W
R487	1462700003	METAL FILM	270 OHM	1%	1/6W
R488	1000333006	CARBON FILM	33K OHM	5%	1/6W
R490	1461602007	METAL FILM	16K OHM	1%	1/6W
R492	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R500	1000102007	CARBON FILM	1K OHM	5%	1/6W
R502	1000151000	CARBON FILM	150 OHM	5%	1/6W
R503	1000562001	CARBON FILM	5.6K OHM	5%	1/6W
R504	1000560007	CARBON FILM	56 OHM	5%	1/6W
R505	1467509003	METAL FILM	75 OHM	1%	1/6W
R507	1461001001	METAL FILM	1K OHM	1%	1/6W
R509	1461001001	METAL FILM	1K OHM	1%	1/6W
R510	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R511	1465600007	METAL FILM	560 OHM	1%	1/6W

R512	1465600007	METAL FILM	560 OHM	1%	1/6W
R513	1020152006	CARBON FILM	1.5K OHM	5%	1/2W
R514	1000101005	CARBON FILM	100 OHM	5%	1/6W
R515	1467509003	METAL FILM	75 OHM	1%	1/6W
R516	1020102001	CARBON FILM	1K OHM	5%	1/2W
R517	1000560007	CARBON FILM	56 OHM	5%	1/6W
R518	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R519	1000101005	CARBON FILM	100 OHM	5%	1/6W
R520	1000101005	CARBON FILM	100 OHM	5%	1/6W
R521	1210681002	METAL OXIDE	680 OHM	5%	1W
R522	1467509003	METAL FILM	75 OHM	1%	1/6W
R523	1467509003	METAL FILM	75 OHM	1%	1/6W
R524	1000560007	CARBON FILM	56 OHM	5%	1/6W
R525	1000101005	CARBON FILM	100 OHM	5%	1/6W
R526	1467509003	METAL FILM	75 OHM	1%	1/6W
R527	1210681002	METAL OXIDE	680 OHM	5%	1W
R528	1000560007	CARBON FILM	56 OHM	5%	1/6W
R529	1000101005	CARBON FILM	100 OHM	5%	1/6W
R530	1467509003	METAL FILM	75 OHM	1%	1/6W
R531	1210681002	METAL OXIDE	680 OHM	5%	1W
R532	1465100007	METAL FILM	510 OHM	1%	1/6W
R533	1465100007	METAL FILM	510 OHM	1%	1/6W
R534	1467509003	METAL FILM	75 OHM	1%	1/6W
R535	1000221005	CARBON FILM	220 OHM	5%	1/6W
R605	1000101005	CARBON FILM	100 OHM	5%	1/6W
R606	1467509003	METAL FILM	75 OHM	1%	1/6W
R607	1467509003	METAL FILM	75 OHM	1%	1/6W
R608	1467509003	METAL FILM	75 OHM	1%	1/6W
R609	1467509003	METAL FILM	75 OHM	1%	1/6W
R610	1467509003	METAL FILM	75 OHM	1%	1/6W
R650	1000101005	CARBON FILM	100 OHM	5%	1/6W
R651	1000101005	CARBON FILM	100 OHM	5%	1/6W
R652	1000101005	CARBON FILM	100 OHM	5%	1/6W
R653	1000101005	CARBON FILM	100 OHM	5%	1/6W
R654	1000101005	CARBON FILM	100 OHM	5%	1/6W
R655	1462001007	METAL FILM	2K OHM	1%	1/6W
R700	1000153004	CARBON FILM	15K OHM	5%	1/6W
R701	1000102007	CARBON FILM	1K OHM	5%	1/6W
R702	1000471008	CARBON FILM	470 OHM	5%	1/6W
R703	1000471008	CARBON FILM	470 OHM	5%	1/6W
R704	1467502009	METAL FILM	75K OHM	1%	1/6W
R705	1000333006	CARBON FILM	33K OHM	5%	1/6W
R706	1000103009	CARBON FILM	10K OHM	5%	1/6W
R707	1000103009	CARBON FILM	10K OHM	5%	1/6W
R708	1000153004	CARBON FILM	15K OHM	5%	1/6W
R709	1000102007	CARBON FILM	1K OHM	5%	1/6W
R710	1000471008	CARBON FILM	470 OHM	5%	1/6W
R711	1464703001	METAL FILM	470K OHM	1%	1/6W
R712	1000474004	CARBON FILM	470K OHM	5%	1/6W
R713	1000224001	CARBON FILM	220K OHM	5%	1/6W
R714	1000104001	CARBON FILM	100K OHM	5%	1/6W
R715	1000103009	CARBON FILM	10K OHM	5%	1/6W
R716	1000183003	CARBON FILM	18K OHM	5%	1/6W
R717	1000102007	CARBON FILM	1K OHM	5%	1/6W
R718	1000102007	CARBON FILM	1K OHM	5%	1/6W
R719	1000103009	CARBON FILM	10K OHM	5%	1/6W
R720	1000331002	CARBON FILM	330 OHM	5%	1/6W
R721	1000392002	CARBON FILM	3.9K OHM	5%	1/6W

R722	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R723	1000103009	CARBON FILM	10K OHM	5%	1/6W
R724	1000153004	CARBON FILM	15K OHM	5%	1/6W
R725	1000101005	CARBON FILM	100 OHM	5%	1/6W
R726	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R727	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R728	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R729	1461003005	METAL FILM	100K OHM	1%	1/6W
R730	1464303005	METAL FILM	430K OHM	1%	1/6W
R731	1000184005	CARBON FILM	180K OHM	5%	1/6W
R732	1000683003	CARBON FILM	68K OHM	5%	1/6W
R735	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R750	1461002003	METAL FILM	10K OHM	1%	1/6W
R751	1462002009	METAL FILM	20K OHM	1%	1/6W
R752	1461002003	METAL FILM	10K OHM	1%	1/6W
R753	1461004007	METAL FILM	1M OHM	1%	1/6W
R754	1462002009	METAL FILM	20K OHM	1%	1/6W
R756	1463301005	METAL FILM	3.3K OHM	1%	1/6W
R757	1462702007	METAL FILM	27K OHM	1%	1/6W
R758	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R759	1000101005	CARBON FILM	100 OHM	5%	1/6W
R760	1467509003	METAL FILM	75 OHM	1%	1/6W
R761	1020821003	CARBON FILM	820 OHM	5%	1/2W
R762	1461002003	METAL FILM	10K OHM	1%	1/6W
R763	1461002003	METAL FILM	10K OHM	1%	1/6W
R764	1462002009	METAL FILM	20K OHM	1%	1/6W
R765	1461004007	METAL FILM	1M OHM	1%	1/6W
R766	1462002009	METAL FILM	20K OHM	1%	1/6W
R768	1463301005	METAL FILM	3.3K OHM	1%	1/6W
R769	1462702007	METAL FILM	27K OHM	1%	1/6W
R770	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R771	1000101005	CARBON FILM	100 OHM	5%	1/6W
R772	1467509003	METAL FILM	75 OHM	1%	1/6W
R773	1020821003	CARBON FILM	820 OHM	5%	1/2W
R774	1000101005	CARBON FILM	100 OHM	5%	1/6W
R775	1467509003	METAL FILM	75 OHM	1%	1/6W
R776	1020821003	CARBON FILM	820 OHM	5%	1/2W
R777	1000560007	CARBON FILM	56 OHM	5%	1/6W
R800	1461602007	METAL FILM	16K OHM	1%	1/6W
R801	1461602007	METAL FILM	16K OHM	1%	1/6W
R802	1000101005	CARBON FILM	100 OHM	5%	1/6W
R803	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R804	1000103009	CARBON FILM	10K OHM	5%	1/6W
R805	1000104001	CARBON FILM	100K OHM	5%	1/6W
R806	1000104001	CARBON FILM	100K OHM	5%	1/6W
R807	1000104001	CARBON FILM	100K OHM	5%	1/6W
R808	1461001001	METAL FILM	1K OHM	1%	1/6W
R809	1463902001	METAL FILM	39K OHM	1%	1/6W
R810	1463902001	METAL FILM	39K OHM	1%	1/6W
R811	1000101005	CARBON FILM	100 OHM	5%	1/6W
R812	1000103009	CARBON FILM	10K OHM	5%	1/6W
R813	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R814	1000104001	CARBON FILM	100K OHM	5%	1/6W
R815	1000104001	CARBON FILM	100K OHM	5%	1/6W
R816	1000104001	CARBON FILM	100K OHM	5%	1/6W
R817	1461001001	METAL FILM	1K OHM	1%	1/6W
R818	1461001001	METAL FILM	1K OHM	1%	1/6W
R820	1462001007	METAL FILM	2K OHM	1%	1/6W

R821	1461001001	METAL FILM	1K OHM	1%	1/6W
R822	1461001001	METAL FILM	1K OHM	1%	1/6W
R824	1462001007	METAL FILM	2K OHM	1%	1/6W
R825	1461001001	METAL FILM	1K OHM	1%	1/6W
R850	1000102007	CARBON FILM	1K OHM	5%	1/6W
R851	1462201005	METAL FILM	2.2K OHM	1%	1/6W
R852	1000471008	CARBON FILM	470 OHM	5%	1/6W
R853	1462202007	METAL FILM	22K OHM	1%	1/6W
R854	1462202007	METAL FILM	22K OHM	1%	1/6W
R855	1462202007	METAL FILM	22K OHM	1%	1/6W
R856	1000103009	CARBON FILM	10K OHM	5%	1/6W
R857	1000103009	CARBON FILM	10K OHM	5%	1/6W
R858	1000103009	CARBON FILM	10K OHM	5%	1/6W
R859	1000101005	CARBON FILM	100 OHM	5%	1/6W
R860	1020821003	CARBON FILM	820 OHM	5%	1/2W
R861	1000101005	CARBON FILM	100 OHM	5%	1/6W
R862	1000101005	CARBON FILM	100 OHM	5%	1/6W
R863	1020821003	CARBON FILM	820 OHM	5%	1/2W
R864	1467509003	METAL FILM	75 OHM	1%	1/6W
R865	1467509003	METAL FILM	75 OHM	1%	1/6W
R866	1467509003	METAL FILM	75 OHM	1%	1/6W
R867	1467509003	METAL FILM	75 OHM	1%	1/6W
R868	1467509003	METAL FILM	75 OHM	1%	1/6W
R869	1467509003	METAL FILM	75 OHM	1%	1/6W
R870	1020821003	CARBON FILM	820 OHM	5%	1/2W
R871	1000101005	CARBON FILM	100 OHM	5%	1/6W
R872	1000101005	CARBON FILM	100 OHM	5%	1/6W
R874	1020821003	CARBON FILM	820 OHM	5%	1/2W
R875	1467509003	METAL FILM	75 OHM	1%	1/6W
R877	1000000009	CARBON FILM	0 OHM		
R878	1467509003	METAL FILM	75 OHM	1%	1/6W
R879	1000102007	CARBON FILM	1K OHM	5%	1/6W
R880	1000680007	CARBON FILM	68 OHM	5%	1/6W
R881	1461801003	METAL FILM	1.8K OHM	1%	1/6W
R882	1464700005	METAL FILM	470 OHM	1%	1/6W
R883	1000180007	CARBON FILM	18 OHM	5%	1/6W
R884	1463300003	METAL FILM	330 OHM	1%	1/6W
R885	1468200009	METAL FILM	820 OHM	1%	1/6W
R886	1000680007	CARBON FILM	68 OHM	5%	1/6W
R887	1461801003	METAL FILM	1.8K OHM	1%	1/6W
R888	1464700005	METAL FILM	470 OHM	1%	1/6W
R889	1000180007	CARBON FILM	18 OHM	5%	1/6W
R890	1463300003	METAL FILM	330 OHM	1%	1/6W
R891	1468200009	METAL FILM	820 OHM	1%	1/6W
R892	1000473002	CARBON FILM	47K OHM	5%	1/6W
R893	1010470003	CARBON FILM	47 OHM	5%	1/4W
R894	1010470003	CARBON FILM	47 OHM	5%	1/4W
R895	1000153004	CARBON FILM	15K OHM	5%	1/6W
R896	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R897	1000103009	CARBON FILM	10K OHM	5%	1/6W
R898	1000103009	CARBON FILM	10K OHM	5%	1/6W
R899	1000103009	CARBON FILM	10K OHM	5%	1/6W
R900	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R901	1000560007	CARBON FILM	56 OHM	5%	1/6W
R902	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R903	1461801003	METAL FILM	1.8K OHM	1%	1/6W
R904	1000103009	CARBON FILM	10K OHM	5%	1/6W
R905	1466802005	METAL FILM	68K OHM	1%	1/6W

R906	1000331002	CARBON FILM	330 OHM	5%	1/6W
R906	1461002003	METAL FILM	10K OHM	1%	1/6W
R907	1010102004	CARBON FILM	1K OHM	5%	1/4W
R940	1462002009	METAL FILM	20K OHM	1%	1/6W
R941	1461002003	METAL FILM	10K OHM	1%	1/6W
R942	1000122003	CARBON FILM	1.2K OHM	5%	1/6W
R943	1462201005	METAL FILM	2.2K OHM	1%	1/6W
R944	1469101003	METAL FILM	9.1K OHM	1%	1/6W
R945	1461002003	METAL FILM	10K OHM	1%	1/6W
R947	1000102007	CARBON FILM	1K OHM	5%	1/6W
R948	1000101005	CARBON FILM	100 OHM	5%	1/6W
R949	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R950	1000101005	CARBON FILM	100 OHM	5%	1/6W
R951	1000102007	CARBON FILM	1K OHM	5%	1/6W
R952	1000471008	CARBON FILM	470 OHM	5%	1/6W
R953	1461004007	METAL FILM	1M OHM	1%	1/6W
R954	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R955	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R956	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R957	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R958	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R959	1451002006	METAL FILM	10K OHM	0.5%	1/6W
R961	1000000009	CARBON FILM	0 OHM		
R962	1000101005	CARBON FILM	100 OHM	5%	1/6W
R980	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R981	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
RA650	1511103112	RESISTOR ARRAY	10K OHMX4	5%	1/8W
-VARIABLE RESISTORS-					
VR433	1711004033	METAL GLAZE	500 OHM	20%	1/3W
VR1	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR2	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR3	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR4	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR50	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR52	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR100	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR101	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR350	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR351	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR352	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR353	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR400	1711004134	METAL GLAZE	200K OHM	20%	1/3W
VR401	1711004006	METAL GLAZE	100 OHM	20%	1/3W
VR402	1711004134	METAL GLAZE	200K OHM	20%	1/3W
VR403	1711004006	METAL GLAZE	100 OHM	20%	1/3W
VR404	1711004033	METAL GLAZE	500 OHM	20%	1/3W
VR480	1711004088	METAL GLAZE	20K OHM	20%	1/3W
VR502	1711004015	METAL GLAZE	200 OHM	20%	1/3W
VR503	1711004015	METAL GLAZE	200 OHM	20%	1/3W
VR700	1711004161	METAL GLAZE	1M OHM	20%	1/3W
VR701	1711004116	METAL GLAZE	500K OHM	20%	1/3W
VR702	1711004152	METAL GLAZE	30K OHM	20%	1/3W
VR703	1711004107	METAL GLAZE	100K OHM	20%	1/3W
VR704	1711004024	METAL GLAZE	300 OHM	20%	1/3W
VR705	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR706	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR708	1711004134	METAL GLAZE	200K OHM	20%	1/3W

VR709	1711004134	METAL GLAZE	200K OHM	20%	1/3W
VR750	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR751	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR800	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR801	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR850	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR851	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR852	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR853	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR940	1711004060	METAL GLAZE	3K OHM	20%	1/3W
-CAPACITORS-					
C1	2090104012	CERAMIC	0.1uF	80/-20%	50V
C8	2610105016	PLASTIC FILM	1uF	10%	100V
C102	2090104012	CERAMIC	0.1uF	80/-20%	50V
C351	2520220006	CERAMIC	22pF	5%	500V
C352	2090104012	CERAMIC	0.1uF	80/-20%	50V
C354	2510101001	CERAMIC	100pF	5%	50V
C355	2510101001	CERAMIC	100pF	5%	50V
C400	2090104012	CERAMIC	0.1uF	80/-20%	50V
C401	2090104012	CERAMIC	0.1uF	80/-20%	50V
C402	2090104012	CERAMIC	0.1uF	80/-20%	50V
C403	2090104012	CERAMIC	0.1uF	80/-20%	50V
C404	2520220006	CERAMIC	22pF	5%	500V
C405	2510181005	CERAMIC	180pF	5%	50V
C406	2520220006	CERAMIC	22pF	5%	500V
C407	2510181005	CERAMIC	180pF	5%	50V
C409	2090104012	CERAMIC	0.1uF	80/-20%	50V
C410	2090104012	CERAMIC	0.1uF	80/-20%	50V
C411	2090104012	CERAMIC	0.1uF	80/-20%	50V
C412	2520820000	CERAMIC	82pF	5%	500V
C413	2520390001	CERAMIC	39pF	5%	500V
C414	2520820000	CERAMIC	82pF	5%	500V
C415	2520390001	CERAMIC	39pF	5%	500V
C416	2090104012	CERAMIC	0.1uF	80/-20%	50V
C417	2090104012	CERAMIC	0.1uF	80/-20%	50V
C418	2090104012	CERAMIC	0.1uF	80/-20%	50V
C419	2510101001	CERAMIC	100pF	5%	50V
C420	2090104012	CERAMIC	0.1uF	80/-20%	50V
C421	2090104012	CERAMIC	0.1uF	80/-20%	50V
C422	2520220006	MICA	18pF	10%	500V
C486	2510101001	CERAMIC	100pF	5%	50V
C487	2240330049	ELECTROLYTIC	33uF	20%	25V
C488	2240330049	ELECTROLYTIC	33uF	20%	25V
C490	2520220006	CERAMIC	22pF	5%	500V
C500	2520220006	MICA	18pF	10%	500V
C508	2090104012	CERAMIC	0.1uF	80/-20%	50V
C511	2240470045	ELECTROLYTIC	47uF	20%	25V
C512	2240470045	ELECTROLYTIC	47uF	20%	25V
C513	2090104012	CERAMIC	0.1uF	80/-20%	50V
C600	2090104012	CERAMIC	0.1uF	80/-20%	50V
C602	2090104012	CERAMIC	0.1uF	80/-20%	50V
C650	2090104012	CERAMIC	0.1uF	80/-20%	50V
C651	2090104012	CERAMIC	0.1uF	80/-20%	50V
C652	2090104012	CERAMIC	0.1uF	80/-20%	50V
C653	2090104012	CERAMIC	0.1uF	80/-20%	50V
C654	2520560000	CERAMIC	56pF	5%	500V
C700	2090104012	CERAMIC	0.1uF	80/-20%	50V

C701	2090104012	CERAMIC	0.1uF	80/-20%	50V
C702	2140102002	PLASTIC FILM	1000pF	5%	50V
C703	2510181005	CERAMIC	180pF	5%	50V
C704	2090104012	CERAMIC	0.1uF	80/-20%	50V
C705	2090104012	CERAMIC	0.1uF	80/-20%	50V
C708	2610683007	PLASTIC FILM	0.068uF	10%	63V
C709	2090104012	CERAMIC	0.1uF	80/-20%	50V
C710	2610223003	PLASTIC FILM	0.022uF	10%	63V
C711	2090104012	CERAMIC	0.1uF	80/-20%	50V
C714	2090104012	CERAMIC	0.1uF	80/-20%	50V
C715	2090104012	CERAMIC	0.1uF	80/-20%	50V
C716	2520220006	CERAMIC	22pF	5%	500V
C717	2200331007	PLASTIC FILM	330pF	5%	100V
C718	2510101001	CERAMIC	100pF	5%	50V
C719	2090104012	CERAMIC	0.1uF	80/-20%	50V
C720	2090104012	CERAMIC	0.1uF	80/-20%	50V
C721	2140333001	PLASTIC FILM	0.033uF	5%	50V
C722	2240470045	ELECTROLYTIC	47uF	20%	25V
C750	2090104012	CERAMIC	0.1uF	80/-20%	50V
C751	2090104012	CERAMIC	0.1uF	80/-20%	50V
C752	2120050005	CERAMIC	5pF	5%	500V
C753	2120050005	CERAMIC	5pF	5%	500V
C754	2090104012	CERAMIC	0.1uF	80/-20%	50V
C755	2090104012	CERAMIC	0.1uF	80/-20%	50V
C756	2120050005	CERAMIC	5pF	5%	500V
C757	2120050005	CERAMIC	5pF	5%	500V
C800	2192023003	PLASTIC FILM	0.01uF	1%	100V
C801	2192023003	PLASTIC FILM	0.01uF	1%	100V
C802	2090104012	CERAMIC	0.1uF	80/-20%	50V
C803	2090104012	CERAMIC	0.1uF	80/-20%	50V
C804	2250229047	ELECTROLYTIC	2.2uF	20%	50V
C805	2250229047	ELECTROLYTIC	2.2uF	20%	50V
C806	2192023003	PLASTIC FILM	0.01uF	1%	100V
C807	2192023003	PLASTIC FILM	0.01uF	1%	100V
C808	2250229047	ELECTROLYTIC	2.2uF	20%	50V
C809	2250229047	ELECTROLYTIC	2.2uF	20%	50V
C810	2090104012	CERAMIC	0.1uF	80/-20%	50V
C811	2090104012	CERAMIC	0.1uF	80/-20%	50V
C850	2090104012	CERAMIC	0.1uF	80/-20%	50V
C851	2090104012	CERAMIC	0.1uF	80/-20%	50V
C852	2090104012	CERAMIC	0.1uF	80/-20%	50V
C853	2090104012	CERAMIC	0.1uF	80/-20%	50V
C940	2090104012	CERAMIC	0.1uF	80/-20%	50V
C941	2090104012	CERAMIC	0.1uF	80/-20%	50V
C942	2090104012	CERAMIC	0.1uF	80/-20%	50V
C943	2090104012	CERAMIC	0.1uF	80/-20%	50V
C944	2090104012	CERAMIC	0.1uF	80/-20%	50V
C945	2090104012	CERAMIC	0.1uF	80/-20%	50V
C947	2090104012	CERAMIC	0.1uF	80/-20%	50V
C948	2090104012	CERAMIC	0.1uF	80/-20%	50V
C951	2090104012	CERAMIC	0.1uF	80/-20%	50V
C980	2240101044	ELECTROLYTIC	100uF	20%	25V
C981	2240101044	ELECTROLYTIC	100uF	20%	25V
C982	2090104012	CERAMIC	0.1uF	80/-20%	50V
C1201	2240221044	ELECTROLYTIC	220uF	20%	25V
C1202	2240221044	ELECTROLYTIC	220uF	20%	25V
C1203	2230331044	ELECTROLYTIC	330uF	20%	16V

—VARIABLE CAPACITORS—				
VC350	2910022007	CERAMIC	4-40pF	250V
VC400	2910022007	CERAMIC	4-40pF	250V
VC401	2910022007	CERAMIC	4-40pF	250V
—TRANSISTORS—				
Q10	3011015012	PNP	2SA1015-Y	
Q11	3011015012	PNP	2SA1015-Y	
Q12	3031815018	NPN	2SC1815-Y	
Q13	3031815018	NPN	2SC1815-Y	
Q14	3031815018	NPN	2SC1815-Y	
Q101	3031815018	NPN	2SC1815-Y	
Q102	3031815018	NPN	2SC1815-Y	
Q350	3010781008	PNP	2SA781	
Q351	3010781008	PNP	2SA781	
Q352	3010781008	PNP	2SA781	
Q353	3010781008	PNP	2SA781	
Q355	3031815018	NPN	2SC1815-Y	
Q400	3031815018	NPN	2SC1815-Y	
Q401	3031815018	NPN	2SC1815-Y	
Q402	3031815018	NPN	2SC1815-Y	
Q403	3031815018	NPN	2SC1815-Y	
Q404	3031815018	NPN	2SC1815-Y	
Q405	3031815018	NPN	2SC1815-Y	
Q406	3030752014	NPN	2SC752(G)-TM-Y	
Q407	3030752014	NPN	2SC752(G)-TM-Y	
Q408	3031815018	NPN	2SC1815-Y	
Q409	3031815018	NPN	2SC1815-Y	
Q410	3031815018	NPN	2SC1815-Y	
Q411	3090067002	FET	2SJ104-BL	
Q480	3031907004	NPN	2SC1907	
Q481	3031907004	NPN	2SC1907	
Q482	3032851009	NPN	2SC2851	
Q483	3031815018	NPN	2SC1815-Y	
Q500	3010781008	PNP	2SA781	
Q501	3031815018	NPN	2SC1815-Y	
Q503	3032851009	NPN	2SC2851	
Q505	3011015012	PNP	2SA1015-Y	
Q506	3011015012	PNP	2SA1015-Y	
Q507	3031815036	NPN	2SC1815-BL	
Q508	3010781008	PNP	2SA781	
Q509	3031815018	NPN	2SC1815-Y	
Q510	3010781008	PNP	2SA781	
Q511	3031815036	NPN	2SC1815-BL	
Q512	3010781008	PNP	2SA781	
Q513	3031815036	NPN	2SC1815-BL	
Q700	3011015012	PNP	2SA1015-Y	
Q701	3030752014	NPN	2SC752(G)-TM-Y	
Q702	3030752014	NPN	2SC752(G)-TM-Y	
Q703	3030752014	NPN	2SC752(G)-TM-Y	
Q750	3011015012	PNP	2SA1015-Y	
Q751	3031815018	NPN	2SC1815-Y	
Q752	3011015012	PNP	2SA1015-Y	
Q753	3031815018	NPN	2SC1815-Y	
Q754	3031815036	NPN	2SC1815-BL	
Q755	3010781008	PNP	2SA781	
Q800	3050030001	FET	2SK30A-GR	
Q801	3050030001	FET	2SK30A-GR	

Q850	3010781008	PNP	2SA781	
Q851	3030752014	NPN	2SC752(G)-TM-Y	
Q852	3031815018	NPN	2SC1815-Y	
Q853	3031815018	NPN	2SC1815-Y	
Q855	3032851009	NPN	2SC2851	
Q856	3032851009	NPN	2SC2851	
Q857	3032851009	NPN	2SC2851	
Q858	3031815018	NPN	2SC1815-Y	
Q862	3010781008	PNP	2SA781	
Q863	3010781008	PNP	2SA781	
Q864	3010781008	PNP	2SA781	
Q865	3010781008	PNP	2SA781	
Q940	3031815018	NPN	2SC1815-Y	
Q941	3031815018	NPN	2SC1815-Y	
—DIODES—				
D2	3120098002	ZENER	RD3.0ESAB2	3.0V
D3	3120098002	ZENER	RD3.0ESAB2	3.0V
D350	3110071005	DETECTOR	1SS97	
D351	3110071005	DETECTOR	1SS97	
D400	3120110006	ZENER	RD9.1ESAB2	9.1V
D401	3110110009	DETECTOR	GMB01	
D402	3110110009	DETECTOR	GMB01	
D403	3120098002	ZENER	RD3.0ESAB2	3.0V
D480	3120098002	ZENER	RD3.0ESAB2	3.0V
D500	3110110009	DETECTOR	GMB01	
D605	3110131007	DETECTOR	MC932	
D650	3110131007	DETECTOR	MC932	
D651	3110131007	DETECTOR	MC932	
D652	3110131007	DETECTOR	MC932	
D653	3110131007	DETECTOR	MC932	
D654	3110131007	DETECTOR	MC932	
D700	3110110009	DETECTOR	GMB01	
D703	3110110009	DETECTOR	GMB01	
D704	3110110009	DETECTOR	GMB01	
D706	3120113002	ZENER	RD12ESAB2	12V
D707	3120106005	ZENER	RD6.2ESAB2	6.2V
D800	3110110009	DETECTOR	GMB01	
D801	3110110009	DETECTOR	GMB01	
D802	3110110009	DETECTOR	GMB01	
D803	3110110009	DETECTOR	GMB01	
D850	3120113002	ZENER	RD12ESAB2	12V
D851	3110131007	DETECTOR	MC932	
D852	3110131007	DETECTOR	MC932	
D853	3110131007	DETECTOR	MC932	
D940	3110012009	ZENER	1SZ51	6.2V
D980	3110110009	DETECTOR	GMB01	
D981	3110110009	DETECTOR	GMB01	
D982	3120097000	ZENER	RD2.7ESAB2	2.7V
—INTEGRATED CIRCUITS—				
IC1	3430028002	CMOS	TC74HC4028P	
IC351	3420008999	HS CMOS	74HC08	
IC352	3420014994	HS CMOS	74HC14	
IC400	3205500012	BAL MODULATOR	NJM1496D	
IC401	3205500012	BAL MODULATOR	NJM1496D	
IC402	3420002997	HS CMOS	74HC02	
IC600	3420004991	HS CMOS	74HC04	

IC602	3260037998	TTL	74LS37
IC650	3420014994	HS CMOS	74HC14
IC651	3260037998	TTL	74LS37
IC652	3420086018	HS CMOS	HD74HC86P
IC653	3260037998	TTL	74LS37
IC702	3310066998	CMOS	4066B
IC703	3201106014	DUAL OP AMP	082
IC704	3201106014	DUAL OP AMP	082
IC705	3201106014	DUAL OP AMP	082
IC706	3202100018	DUAL COMPARATOR	319
IC707	3320038990	CMOS	4538B
IC750	3201118002	DUAL OP AMP	M5238P
IC800	3201106014	DUAL OP AMP	082
IC801	3201106014	DUAL OP AMP	082
IC850	3420000993	HS CMOS	74HC00
IC851	3270140008	TTL	SN74S140
IC852	3260000995	TTL	74LS00
IC853	3202101038	DUAL COMPARATOR	393
IC940	3203113004	A/D CONVERTER	MB88341 (DIP)
IC941	3201113002	DUAL OP AMP	uPC812C
IC942	3201204014	QUAD OP AMP	084
IC943	3201204014	QUAD OP AMP	084
IC944	3201204014	QUAD OP AMP	084
IC980	3420000993	HS CMOS	74HC00
−COILS−			
L400	3900840003	COIL	L-840
L401	3900849001	COIL	L-849
L402	3900849001	COIL	L-849
L403	3900849001	COIL	L-849
L404	3900849001	COIL	L-849
L405	3900734013	COIL	L-734A
K400	4080050016	RELAY	DS2E-S-DC5V AG232944
K500	4080053012	RELAY	DS1E-S-DC5V AG231944
−SWITCHES−			
SW650	4070101001	DIP	DSS-104
−CONNECTORS−			
ICS602	4323045004	IC SOCKET	110-99-314
ICS651	4323045004	IC SOCKET	110-99-314
ICS653	4323045004	IC SOCKET	110-99-314
ICS801	4323050007	IC SOKET(8P)	110-99-308
ICS851	4323045004	IC SOCKET	110-99-314
ICS852	4323045004	IC SOCKET	110-99-314
ICS853	4323050007	IC SOKET(8P)	110-99-308
J602	4310747001	CONNECTOR	BNC-080
J603	4310747001	CONNECTOR	BNC-080
J604	4310747001	CONNECTOR	BNC-080
J650	4319014002	CONNECTOR	08K0157
J702(GEN)	4310747001	CONNECTOR	BNC-080
J750	4310747001	CONNECTOR	BNC-080
J751	4310747001	CONNECTOR	BNC-080
J752	4310747001	CONNECTOR	BNC-080
J800	4310747001	CONNECTOR	BNC-080
J801	4310747001	CONNECTOR	BNC-080
J850	4319015004	CONNECTOR	S-I2204#01
J851	4319015004	CONNECTOR	S-I2204#01

J852	4310151008	CONNECTOR	SML 010

—MISCELLANEOUS—

FB500	3890017001	FERRITE BEAD	L1RH0303 H=1
FB501	3890017001	FERRITE BEAD	L1RH0303 H=1
FB502	3890017001	FERRITE BEAD	L1RH0303 H=1
FB503	3890017001	FERRITE BEAD	L1RH0303 H=1
FB750	3890017001	FERRITE BEAD	L1RH0303 H=1
FB751	3890017001	FERRITE BEAD	L1RH0303 H=1
FB752	3890017001	FERRITE BEAD	L1RH0303 H=1
FB850	3890017001	FERRITE BEAD	L1RH0303 H=1
FB851	3890017001	FERRITE BEAD	L1RH0303 H=1
FB852	3890017001	FERRITE BEAD	L1RH0303 H=1
FB853	3890017001	FERRITE BEAD	L1RH0303 H=1
FB854	3890017001	FERRITE BEAD	L1RH0303 H=1
P500	4413504001		MB4P-90-24
P501	4413504001		MB4P-90-24
P502	4413504001		MB4P-90-24
P503	4413504001		MB4P-90-24
P750	4413505003		MB4P-90-24
P751	4413505003		MB4P-90-24
P752	4413504001		MB4P-90-24
P850	4413505003		MB4P-90-24
P851	4413505003		MB4P-90-24
P852	4413505003		MB4P-90-24
P853	4413505003		MB4P-90-24
P605	4413003018	XH CONNECTOR TOP ENTRY	B3B-XH-A
P802	4413004010	XH CONNECTOR TOP ENTRY	B4B-XH-A
P940	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A
P981	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB
P1001	4413802009	FFC CONNECTOR	5597-30CPB
P1002	4413010015	XH CONNECTOR TOP ENTRY	B10B-XH-A
P1101	4413802009	FFC CONNECTOR	5597-30CPB
P1201	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A
P1202	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB
TP3	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP400	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP401	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP480	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP700	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP750	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP751	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP752	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP753	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP800	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP801	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP940	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP941	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP942	4384003006	TP TERMINAL	LC-2-S(ORANGE)

***** SWEEP/MULTI BOARD T-5201 *****

—RESISTORS—

R1	1000101005	CARBON FILM	100 OHM	5%	1/6W
R2	1000122003	CARBON FILM	1.2K OHM	5%	1/6W
R3	1000122003	CARBON FILM	1.2K OHM	5%	1/6W
R4	1463001003	METAL FILM	3K OHM	1%	1/6W

R6	1020821003	CARBON FILM	820 OHM	5%	1/2W
R7	1464300009	METAL FILM	430 OHM	1%	1/6W
R8	1000000009	CARBON FILM	0 OHM		
R9	1469100001	METAL FILM	910 OHM	1%	1/6W
R10	1469100001	METAL FILM	910 OHM	1%	1/6W
R50	1468200009	METAL FILM	820 OHM	1%	1/6W
R51	1461001001	METAL FILM	1K OHM	1%	1/6W
R52	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R53	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R54	1461001001	METAL FILM	1K OHM	1%	1/6W
R55	1000105003	CARBON FILM	1M OHM	5%	1/6W
R56	1000102007	CARBON FILM	1K OHM	5%	1/6W
R57	1000101005	CARBON FILM	100 OHM	5%	1/6W
R58	1000101005	CARBON FILM	100 OHM	5%	1/6W
R59	1000102007	CARBON FILM	1K OHM	5%	1/6W
R60	1000105003	CARBON FILM	1M OHM	5%	1/6W
R61	1451500002	METAL FILM	150 OHM	0.5%	2W
R62	1000220003	CARBON FILM	22 OHM	5%	1/6W
R63	1000390008	CARBON FILM	39 OHM	5%	1/6W
R64	1000474004	CARBON FILM	470K OHM	5%	1/6W
R66	1000182001	CARBON FILM	1.8K OHM	5%	1/6W
R67	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R68	1000220003	CARBON FILM	22 OHM	5%	1/6W
R69	1000103009	CARBON FILM	10K OHM	5%	1/6W
R71	1000101005	CARBON FILM	100 OHM	5%	1/6W
R72	1000100003	CARBON FILM	10 OHM	5%	1/6W
R73	1000101005	CARBON FILM	100 OHM	5%	1/6W
R74	1457509006	METAL FILM	75 OHM	0.5%	1/6W
R75	1000100003	CARBON FILM	10 OHM	5%	1/6W
R76	1468209007	METAL FILM	82 OHM	1%	1/6W
R77	1000101005	CARBON FILM	100 OHM	5%	1/6W
R78	1464709003	METAL FILM	447 OHM	1%	1/6W
R79	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R80	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R81	1000101005	CARBON FILM	100 OHM	5%	1/6W
R82	1000101005	CARBON FILM	100 OHM	5%	1/6W
R83	1000100003	CARBON FILM	10 OHM	5%	1/6W
R84	1000100003	CARBON FILM	10 OHM	5%	1/6W
R85	1462401003	METAL FILM	2.4K OHM	1%	1/6W
R86	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R87	1462701005	METAL FILM	2.7K OHM	1%	1/6W
R88	1000471008	CARBON FILM	470 OHM	5%	1/6W
R89	1000471008	CARBON FILM	470 OHM	5%	1/6W
R90	1000471008	CARBON FILM	470 OHM	5%	1/6W
R91	1464700005	METAL FILM	470 OHM	1%	1/6W
R92	1000471008	CARBON FILM	470 OHM	5%	1/6W
R93	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R94	1000471008	CARBON FILM	470 OHM	5%	1/6W
R95	1000471008	CARBON FILM	470 OHM	5%	1/6W
R96	1464700005	METAL FILM	470 OHM	1%	1/6W
R97	1461601005	METAL FILM	1.6K OHM	1%	1/6W
R98	1461301003	METAL FILM	1.3K OHM	1%	1/6W
R99	1463601007	METAL FILM	3.6K OHM	1%	1/6W
R100	1000821009	CARBON FILM	820 OHM	5%	1/6W
R101	1000471008	CARBON FILM	470 OHM	5%	1/6W
R102	1000471008	CARBON FILM	470 OHM	5%	1/6W
R103	1000102007	CARBON FILM	1K OHM	5%	1/6W
R104	1000331002	CARBON FILM	330 OHM	5%	1/6W

R105	1000333006	CARBON FILM	33K OHM	5%	1/6W
R106	1467509003	METAL FILM	75 OHM	1%	1/6W
R107	1467509003	METAL FILM	75 OHM	1%	1/6W
R108	1465600007	METAL FILM	560 OHM	1%	1/6W
R109	1463300003	METAL FILM	330 OHM	1%	1/6W
R110	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R111	1462201005	METAL FILM	2.2K OHM	1%	1/6W
R112	1462201005	METAL FILM	2.2K OHM	1%	1/6W
R113	1461801003	METAL FILM	1.8K OHM	1%	1/6W
R114	1465601009	METAL FILM	5.6K OHM	1%	1/6W
R115	1465101009	METAL FILM	5.1K OHM	1%	1/6W
R116	1462201005	METAL FILM	2.2K OHM	1%	1/6W
R118	1000101005	CARBON FILM	100 OHM	5%	1/6W
R119	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R120	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R121	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R122	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R123	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R124	1463900007	METAL FILM	390 OHM	1%	1/6W
R125	1463601007	METAL FILM	3.6K OHM	1%	1/6W
R200	1000103009	CARBON FILM	10K OHM	5%	1/6W
R201	1462200003	METAL FILM	220 OHM	1%	1/6W
R202	1461300001	METAL FILM	130 OHM	1%	1/6W
R203	1468209007	METAL FILM	82 OHM	1%	1/6W
R204	1464709003	METAL FILM	447 OHM	1%	1/6W
R205	1463009009	METAL FILM	30 OHM	1%	1/6W
R206	1463909005	METAL FILM	39 OHM	1%	1/6W
R207	1462001007	METAL FILM	2K OHM	1%	1/6W
R208	1461001001	METAL FILM	1K OHM	1%	1/6W
R209	1464700005	METAL FILM	470 OHM	1%	1/6W
R210	1463300003	METAL FILM	330 OHM	1%	1/6W
R211	1461200007	METAL FILM	120 OHM	1%	1/6W
R212	1461300001	METAL FILM	130 OHM	1%	1/6W
R213	1468209007	METAL FILM	82 OHM	1%	1/6W
R214	1464709003	METAL FILM	447 OHM	1%	1/6W
R215	1463009009	METAL FILM	30 OHM	1%	1/6W
R216	1463909005	METAL FILM	39 OHM	1%	1/6W
R217	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R218	1000103009	CARBON FILM	10K OHM	5%	1/6W
R219	1461802005	METAL FILM	18K OHM	1%	1/6W
R220	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R221	1463901009	METAL FILM	3.9K OHM	1%	1/6W
R222	1463901009	METAL FILM	3.9K OHM	1%	1/6W
R223	1000100003	CARBON FILM	10 OHM	5%	1/6W
R224	1000100003	CARBON FILM	10 OHM	5%	1/6W
R225	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R226	1000103009	CARBON FILM	10K OHM	5%	1/6W
R227	1461802005	METAL FILM	18K OHM	1%	1/6W
R228	1461800001	METAL FILM	180 OHM	1%	1/6W
R229	1469109009	METAL FILM	91 OHM	1%	1/6W
R230	1469109009	METAL FILM	91 OHM	1%	1/6W
R231	1000220003	CARBON FILM	22 OHM	5%	1/6W
R232	1000102007	CARBON FILM	1K OHM	5%	1/6W
R233	1000332004	CARBON FILM	3.3K OHM	5%	1/6W
R234	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R235	1000101005	CARBON FILM	100 OHM	5%	1/6W
R236	1000101005	CARBON FILM	100 OHM	5%	1/6W

—VARIABLE RESISTER—					
VR50	1711004152	METAL GLAZE	30K OHM	20%	1/3W
VR51	1711004152	METAL GLAZE	30K OHM	20%	1/3W
VR52	1711004015	METAL GLAZE	200 OHM	20%	1/3W
VR53	1711004060	METAL GLAZE	3K OHM	20%	1/3W
VR54	1711004033	METAL GLAZE	500 OHM	20%	1/3W
VR55	1711004051	METAL GLAZE	2K OHM	20%	1/3W
VR56	1711004033	METAL GLAZE	500 OHM	20%	1/3W
VR200	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR201	1711004125	METAL GLAZE	5K OHM	20%	1/3W
VR202	1711004042	METAL GLAZE	1K OHM	20%	1/3W
—CAPACTORS—					
C1	2240330049	ELECTROLYTIC	33uF	20%	25V
C2	2240330049	ELECTROLYTIC	33uF	20%	25V
C3	2240221044	ELECTROLYTIC	220uF	20%	25V
C4	2090104012	CERAMIC	0.1uF	80/-20%	50V
C5	2610334002	PLASTIC FILM	0.33uF	10%	63V
C6	2240221044	ELECTROLYTIC	220uF	20%	25V
C7	2090104012	CERAMIC	0.1uF	80/-20%	50V
C8	2610334002	PLASTIC FILM	0.33uF	10%	63V
C9	2230101047	ELECTROLYTIC	100uF	20%	16V
C10	2090104012	CERAMIC	0.1uF	80/-20%	50V
C11	2610334002	PLASTIC FILM	0.33uF	10%	63V
C12	2240221044	ELECTROLYTIC	220uF	20%	25V
C13	2240221044	ELECTROLYTIC	220uF	20%	25V
C14	2230331044	ELECTROLYTIC	330uF	20%	16V
C15	2510030004	CERAMIC	3pF	0.5pF	50V
C16	2520030001	CERAMIC	3pF	±0.5PF	500V
C17	2510100009	CERAMIC	10pF	0.5pF	50V
C50	2090104012	CERAMIC	0.1uF	80/-20%	50V
C51	2240470045	ELECTROLYTIC	47uF	20%	25V
C53	2090104012	CERAMIC	0.1uF	80/-20%	50V
C54	2240470045	ELECTROLYTIC	47uF	20%	25V
C55	2010103014	CERAMIC	0.01uF	80/-20%	50V
C56	2240470045	ELECTROLYTIC	47uF	20%	25V
C57	2510221001	CERAMIC	CC45CH1H221 JY		
C58	2090104012	CERAMIC	0.1uF	80/-20%	50V
C59	2520050007	CERAMIC	5pF	5%	500V
C60	2240470045	ELECTROLYTIC	47uF	20%	25V
C61	2240470045	ELECTROLYTIC	47uF	20%	25V
C62	2120070001	MICA	7pF	10%	500V
C63	2240100042	ELECTROLYTIC	10uF	20%	25V
C65	2010103014	CERAMIC	0.01uF	80/-20%	50V
C66	2240470045	ELECTROLYTIC	47uF	20%	25V
C67	2090104012	CERAMIC	0.1uF	80/-20%	50V
C68	2090104012	CERAMIC	0.1uF	80/-20%	50V
C69	2240330049	ELECTROLYTIC	33uF	20%	25V
C70	2090104012	CERAMIC	0.1uF	80/-20%	50V
C71	2240330049	ELECTROLYTIC	33uF	20%	25V
C72	2090104012	CERAMIC	0.1uF	80/-20%	50V
C73	2090104012	CERAMIC	0.1uF	80/-20%	50V
C76	2520100006	CERAMIC	10pF	5%	500V
C77	2910018006	CERAMIC	2.8-10pF		250V
C200	2520100006	CERAMIC	10pF	5%	500V
C201	2520220006	CERAMIC	22pF	5%	500V
C202	2520820000	CERAMIC	82pF	5%	500V
C203	2090104012	CERAMIC	0.1uF	80/-20%	50V

C204	2090104012	CERAMIC	0.1uF	80/-20%	50V
C205	2240470045	ELECTROLYTIC	47uF	20%	25V
C206	2240470045	ELECTROLYTIC	47uF	20%	25V
C207	2520220006	CERAMIC	22pF	5%	500V
C210	2120470007	MICA	47pF	5%	500V
C211	2120180008	MICA	18pF	10%	500V
C212	2010102012	CERAMIC	1000pF	10%	50V
C213	2010102012	CERAMIC	1000pF	10%	50V
—VARIABLE CAPACITORS—					
VC52	2910065005	CERAMIC	2222 808 23209		
VC200	2910066007	CERAMIC	2222 808 11409		
VC201	2910065005	CERAMIC	2222 808 23209		
—TRANSISTORS—					
Q1	3031815018	NPN	2SC1815-Y		
Q2	3031815018	NPN	2SC1815-Y		
Q3	3032851009	NPN	2SC2851		
Q50	3032362013	NPN	2SC2362-KG		
Q51	3011145006	PNP	2SA1145-O		
Q52	3011145006	PNP	2SA1145-O		
Q53	3031907004	NPN	2SC1907		
Q54	3032705008	NPN	2SC2705-O		
Q57	3031907004	NPN	2SC1907		
Q58	3090036001	FET	2N5486		
Q59	3090036001	FET	2N5486		
Q60	3010711007	PNP	2SA711		
Q61	3031260000	NPN	2SC1260		
Q62	3031260000	NPN	2SC1260		
Q63	3010711007	PNP	2SA711		
Q64	3030752005	NPN	2SC752(G)TM-O		
Q65	3030752005	NPN	2SC752(G)TM-O		
Q66	3030752005	NPN	2SC752(G)TM-O		
Q67	3030752005	NPN	2SC752(G)TM-O		
Q68	3030752005	NPN	2SC752(G)TM-O		
Q69	3032705008	NPN	2SC2705-O		
Q70	3031815018	NPN	2SC1815-Y		
Q71	3011015012	PNP	2SA1015-Y		
Q72	3031815018	NPN	2SC1815-Y		
Q200	3031815018	NPN	2SC1815-Y		
Q201	3031815018	NPN	2SC1815-Y		
Q202	3031815018	NPN	2SC1815-Y		
Q203	3011015012	PNP	2SA1015-Y		
Q204	3011015012	PNP	2SA1015-Y		
Q205	3011015012	PNP	2SA1015-Y		
Q206	3031815018	NPN	2SC1815-Y		
Q207	3010781008	PNP	2SA781		
Q208	3030752005	NPN	2SC752(G)TM-O		
—DIODES—					
D1	3120106005	ZENER	RD6.2ESAB2		6.2V
D50	3140019013	VARICAP	1SV68(SELECTED)		
D51	3110071005	DETECTOR	1SS97		
D52	3110110009	DETECTOR	GMB01		
D53	3120104001	ZENER	RD5.1ESAB2		5.1V
D54	3110110009	DETECTOR	GMB01		
D55	3110071005	DETECTOR	1SS97		
D200	3110071005	DETECTOR	1SS97		

D201	3110071005	DETECTOR	1SS97	
D202	3110071005	DETECTOR	1SS97	
D203	3110071005	DETECTOR	1SS97	
D204	3110071005	DETECTOR	1SS97	
D205	3110071005	DETECTOR	1SS97	
D206	3110071005	DETECTOR	1SS97	
D207	3110071005	DETECTOR	1SS97	
D208	3110071005	DETECTOR	1SS97	
D209	3110071005	DETECTOR	1SS97	
D210	3110071005	DETECTOR	1SS97	
D211	3110071005	DETECTOR	1SS97	
D212	3120110006	ZENER	RD9.1ESAB2	9.1V
D213	3110110009	DETECTOR	GMB01	
D214	3110110009	DETECTOR	GMB01	
D215	3120110006	ZENER	RD9.1ESAB2	9.1V
D216	3110110009	DETECTOR	GMB01	
−INTEGRATED CIRCUITS−				
IC1	3200105997	REGULATOR	7812	
IC2	3200305995	REGULATOR	7912	
IC3	3200100997	REGULATOR	7805	
IC50	3201002003	SINGLE OP AMP	LF411CN	
IC51	3201037002	SINGLE OP AMP	LT1055CH	
IC52	3201037002	SINGLE OP AMP	LT1055CH	
IC53	3370131115	ECL	MC10131L	
IC54	3370116119	ECL	MC10116L	
IC55	3201113002	DUAL OP AMP	uPC812C	
−COILS−				
L200	3930189033	COIL	1.8uH	
L201	3930828031	CHOKE COIL	0.82uF	10%
L202	3930228037	CHOKE COIL	0.22uH	20%
−CONNECTORS−				
J1	4310151008	CONNECTOR	SML 010	
−MISCELLANEOUS−				
K200	RELAY		AG231944(DS1E-S-DC5V	
FB50	3890017001	FERRITE BEAD	L1RH0303 H=1	
FB51	3890017001	FERRITE BEAD	L1RH0303 H=1	
TH50	3550035001	THERMISTOR	2KD-5	
P2	4413803001	FFC CONNECTOR TOP ENTRY	5597-20CPB	
TP1	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP2	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP3	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP4	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP5	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP6	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP7	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP8	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP50	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP51	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP200	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP201	4384003006	TP TERMINAL	LC-2-S(ORANGE)	
TP202	4384003006	TP TERMINAL	LC-2-S(ORANGE)	

*** SECAM.C.D/A BOARD T-5091 ***

-RESISTORS-					
R1	1000473002	CARBON FILM	47K OHM	5%	1/6W
R2	1000473002	CARBON FILM	47K OHM	5%	1/6W
R3	1461602007	METAL FILM	16K OHM	1%	1/6W
R4	1000822001	CARBON FILM	8.2K OHM	5%	1/6W
R5	1464701007	METAL FILM	4.7K OHM	1%	1/6W
R6	1461201009	METAL FILM	1.2K OHM	1%	1/6W
R201	1000473002	CARBON FILM	47K OHM	5%	1/6W
R202	1462400001	METAL FILM	240 OHM	1%	1/6W
R203	1467509003	METAL FILM	75 OHM	1%	1/6W
R204	1000102007	CARBON FILM	1K OHM	5%	1/6W
RA1	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA2	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA3	1515104118	RESISTOR ARRAY	100K OHMX8	5%	1/8W
RA201	1515102114	RESISTOR ARRAY	1K OHMX9	5%	1/8W
-VARIABLE RESISTORS-					
VR1	1713102008	CERMET	1K OHM	10%	1/2W
-CAPACITORS-					
C1	2220221040	ELECTROLYTIC	220uF	20%	10V
C2	2090104012	CERAMIC	0.1uF	80/-20%	50V
C3	2192023003	PLASTIC FILM	0.01uF	1%	100V
C4	2200561004	PLASTIC FILM	560pF	5%	100V
C5	2090104012	CERAMIC	0.1uF	80/-20%	50V
C6	2090104012	CERAMIC	0.1uF	80/-20%	50V
C7	2090104012	CERAMIC	0.1uF	80/-20%	50V
C8	2090104012	CERAMIC	0.1uF	80/-20%	50V
C9	2192066001	PLASTIC FILM	330pF	1%	100V
C10	2192066001	PLASTIC FILM	330pF	1%	100V
C11	2090104012	CERAMIC	0.1uF	80/-20%	50V
C12	2090104012	CERAMIC	0.1uF	80/-20%	50V
C13	2090104012	CERAMIC	0.1uF	80/-20%	50V
C14	2090104012	CERAMIC	0.1uF	80/-20%	50V
C15	2090104012	CERAMIC	0.1uF	80/-20%	50V
C16	2090104012	CERAMIC	0.1uF	80/-20%	50V
C17	2090104012	CERAMIC	0.1uF	80/-20%	50V
C18	2090104012	CERAMIC	0.1uF	80/-20%	50V
C101	2090104012	CERAMIC	0.1uF	80/-20%	50V
C102	2090104012	CERAMIC	0.1uF	80/-20%	50V
C103	2090104012	CERAMIC	0.1uF	80/-20%	50V
C104	2090104012	CERAMIC	0.1uF	80/-20%	50V
C105	2090104012	CERAMIC	0.1uF	80/-20%	50V
C106	2090104012	CERAMIC	0.1uF	80/-20%	50V
C107	2090104012	CERAMIC	0.1uF	80/-20%	50V
C108	2090104012	CERAMIC	0.1uF	80/-20%	50V
C109	2090104012	CERAMIC	0.1uF	80/-20%	50V
C110	2090104012	CERAMIC	0.1uF	80/-20%	50V
C111	2090104012	CERAMIC	0.1uF	80/-20%	50V
C112	2090104012	CERAMIC	0.1uF	80/-20%	50V
C201	2090104012	CERAMIC	0.1uF	80/-20%	50V
C202	2090104012	CERAMIC	0.1uF	80/-20%	50V
C203	2220101040	ELECTROLYTIC	100uF	20%	10V
C204	2090104012	CERAMIC	0.1uF	80/-20%	50V
C205	2250109047	ELECTROLYTIC	1uF	20%	50V
C206	2090104012	CERAMIC	0.1uF	80/-20%	50V

C207	2220101040	ELECTROLYTIC	100uF	20%	10V
C208	2220101040	ELECTROLYTIC	100uF	20%	10V
C209	2090104012	CERAMIC	0.1uF	80/-20%	50V
C210	2090104012	CERAMIC	0.1uF	80/-20%	50V
−INTEGRATED CIRCUITS−					
IC1	3420132990	HS CMOS	74HC132		
IC2	3440038002	CMOS	TC74HC4538P		
IC3	3420002997	HS CMOS	74HC02		
IC4	3430040992	HS CMOS	74HC4040		
IC5	3401306009	EPROM	MBM27C512-20		
IC6	3420574992	HS CMOS	74CH574		
IC7	3420074992	HS CMOS	74HC74		
IC8	3420112994	HS CMOS	74HC112		
IC9	3440038002	CMOS	TC74HC4538P		
IC10	3420112994	HS CMOS	74HC112		
IC11	3420000993	HS CMOS	74HC00		
IC12	3420000993	HS CMOS	74HC00		
IC13	3430040992	HS CMOS	74HC4040		
IC101	3401306009	EPROM	MBM27C512-20		
IC102	3401306009	EPROM	MBM27C512-20		
IC103	3401306009	EPROM	MBM27C512-20		
IC104	3401306009	EPROM	MBM27C512-20		
IC105	3420166997	HS CMOS	74HC166		
IC106	3420166997	HS CMOS	74HC166		
IC107	3420166997	HS CMOS	74HC166		
IC108	3420166997	HS CMOS	74HC166		
IC109	3420166997	HS CMOS	74HC166		
IC110	3420166997	HS CMOS	74HC166		
IC111	3420166997	HS CMOS	74HC166		
IC112	3420166997	HS CMOS	74HC166		
IC201	3420000993	H S CMOS	74HC00		
IC202	3420574992	HS CMOS	74CH574		
IC203	3203123007	D/A CONVERTER	uPD6902C		
IC204	3200703016		uPC1060C		
−COILS−					
L201	3930330038	CHOKE COIL	33uH	10%	
−CONNECTORS−					
ICS5	4323042008	IC SOCKET	110-99-628		
ICS101	4323042008	IC SOCKET	110-99-628		
ICS102	4323042008	IC SOCKET	110-99-628		
ICS103	4323042008	IC SOCKET	110-99-628		
ICS104	4323042008	IC SOCKET	110-99-628		
J1	4310152000	CONNECTOR	SML 015		
J201	4310152000	CONNECTOR	SML 015		
−MISCELLANEOUS−					
TP1	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP2	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP201	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
P1	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A		
P2	4413010015	XH CONNECTOR TOP ENTRY	B10B-XH-A		
P3	4413004010	XH CONNECTOR TOP ENTRY	B4B-XH-A		

***** PANEL BOARD T-4604 *****

—RESISTORS—					
JP101	1000000009	CARBON FILM	0 OHM		
JP102	1000000009	CARBON FILM	0 OHM		
JP103	1000000009	CARBON FILM	0 OHM		
R1	1000471008	CARBON FILM	470 OHM	5%	1/6W
R101	1000101005	CARBON FILM	100 OHM	5%	1/6W
R102	1000101005	CARBON FILM	100 OHM	5%	1/6W
R103	1000104001	CARBON FILM	100K OHM	5%	1/6W
R104	1000104001	CARBON FILM	100K OHM	5%	1/6W
R105	1000223009	CARBON FILM	22K OHM	5%	1/6W
R106	1000223009	CARBON FILM	22K OHM	5%	1/6W
R107	1000471008	CARBON FILM	470 OHM	5%	1/6W
R108	1010180004	CARBON FILM	18 OHM	5%	1/4W
R109	1000272002	CARBON FILM	2.7K OHM	5%	1/6W
R110	1000152002	CARBON FILM	1.5K OHM	5%	1/6W
R111	1000102007	CARBON FILM	1K OHM	5%	1/6W
R112	1010339005	CARBON FILM	3.3 OHM	5%	1/4W
RA1	1515104118	RESISTOR ARRAY	100K OHMX8	5%	1/8W
RA2	1515103116	RESISTOR ARRAY	10K OHMX8	5%	1/8W
RA3	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
RA4	1515471115	RESISTOR ARRAY	470 OHMX8	5%	1/8W
RA5	1515471115	RESISTOR ARRAY	470 OHMX8	5%	1/8W
RA6	1515471115	RESISTOR ARRAY	470 OHMX8	5%	1/8W
RA7	1515471115	RESISTOR ARRAY	470 OHMX8	5%	1/8W
RA8	1515471115	RESISTOR ARRAY	470 OHMX8	5%	1/8W
—VARIABLE RESISTORS—					
VR101	1711004042	METAL GLAZE	1K OHM	20%	1/3W
—CAPACITORS—					
C1	2010103014	CERAMIC	0.01uF	80/-20%	50V
C2	2010103014	CERAMIC	0.01uF	80/-20%	50V
C101	2010103014	CERAMIC	0.01uF	80/-20%	50V
C102	2010103014	CERAMIC	0.01uF	80/-20%	50V
C103	2140104006	PLASTIC FILM	0.1uF	5%	50V
C104	2140104006	PLASTIC FILM	0.1uF	5%	50V
C105	2010103014	CERAMIC	0.01uF	80/-20%	50V
C106	2220101040	ELECTROLYTIC	100uF	20%	10V
—TRANSISTORS—					
Q1	3011015012	PNP	2SA1015-Y		
Q2	3011015012	PNP	2SA1015-Y		
Q3	3011015012	PNP	2SA1015-Y		
Q4	3011015012	PNP	2SA1015-Y		
Q5	3011015012	PNP	2SA1015-Y		
Q6	3011015012	PNP	2SA1015-Y		
Q7	3011015012	PNP	2SA1015-Y		
Q101	3011015012	PNP	2SA1015-Y		
—DIODES—					
D1	3130089008	LED	TLY-114A		
D2	3130089008	LED	TLY-114A		
D3	3130087004	LED	TLG-114A		
D4	3130087004	LED	TLG-114A		
—INTEGRATED CIRCUITS—					
IC1	3320032998	CMOS	4532B		

IC2	3320032998	CMOS	4532B
IC101	3320038990	CMOS	4538B

-SWITCHES-

S1	4021018005	TACTILE	JPG2990-0103
S2	4021018005	TACTILE	JPG2990-0103
S3	4021018005	TACTILE	JPG2990-0103
S4	4021018005	TACTILE	JPG2990-0103
S5	4021018005	TACTILE	JPG2990-0103
S6	4021018005	TACTILE	JPG2990-0103
S7	4021018005	TACTILE	JPG2990-0103
S8	4021018005	TACTILE	JPG2990-0103
S9	4021018005	TACTILE	JPG2990-0103
S10	4021018005	TACTILE	JPG2990-0103
S11	4021018005	TACTILE	JPG2990-0103
S12	4021018005	TACTILE	JPG2990-0103
S13	4021018005	TACTILE	JPG2990-0103
S14	4021018005	TACTILE	JPG2990-0103
S15	4021018005	TACTILE	JPG2990-0103
S16	4021018005	TACTILE	JPG2990-0103
S17	4021018005	TACTILE	JPG2990-0103
S18	4021018005	TACTILE	JPG2990-0103
S19	4021018005	TACTILE	JPG2990-0103
S20	4021018005	TACTILE	JPG2990-0103
S21	4021018005	TACTILE	JPG2990-0103
S22	4021018005	TACTILE	JPG2990-0103
S23	4021018005	TACTILE	JPG2990-0103
S24	4021018005	TACTILE	JPG2990-0103
S25	4021018005	TACTILE	JPG2990-0103
S26	4021018005	TACTILE	JPG2990-0103
S27	4021019007	TACTILE	JPG1990-0101
S28	4021018005	TACTILE	JPG2990-0103
S29	4021018005	TACTILE	JPG2990-0103
S30	4021018005	TACTILE	JPG2990-0103
S31	4021019007	TACTILE	JPG1990-0101
S32	4021019007	TACTILE	JPG1990-0101
S33	4021019007	TACTILE	JPG1990-0101
S34	4021019007	TACTILE	JPG1990-0101
S35	4021018005	TACTILE	JPG2990-0103
S36	4021019007	TACTILE	JPG1990-0101
S37	4021019007	TACTILE	JPG1990-0101
S101	4070402023	INC ENCODER	EC16B25DL L=20

-MISCELLANEOUS-

P101	4413802009	FFC CONNECTOR	5597-30CPB
P102	4413802009	FFC CONNECTOR	5597-30CPB
P103	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A
P104	4413003018	XH CONNECTOR TOP ENTRY	B3B-XH-A
P105	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A

***** POWER BOARD T-4603 *****

-RESISTORS-

R1	1220332004	METAL OXIDE	3.3K OHM	5%	2W
R2	1000473002	CARBON FILM	47K OHM	5%	1/6W
R3	1000472000	CARBON FILM	4.7K OHM	5%	1/6W
R4	1000472000	CARBON FILM	4.7K OHM	5%	1/6W

R5	1000154006	CARBON FILM	150K OHM	5%	1/6W
R6	1000153004	CARBON FILM	15K OHM	5%	1/6W
R7	1000153004	CARBON FILM	15K OHM	5%	1/6W
R8	1000154006	CARBON FILM	150K OHM	5%	1/6W
R10	1000153004	CARBON FILM	15K OHM	5%	1/6W
R11	1010000006	CARBON FILM	0 OHM		

—CAPACITOR—

C1	2382183031	ELECTROLYTIC	SMH 16VNSN18000-25C		
C2	2250109047	ELECTROLYTIC	1uF	20%	50V
C3	2230100045	ELECTROLYTIC	10uF	20%	16V
C4	2250109047	ELECTROLYTIC	1uF	20%	50V
C5	2230100045	ELECTROLYTIC	10uF	20%	16V
C6	2250221041	ELECTROLYTIC	22uF	20%	50V
C7	2250221041	ELECTROLYTIC	22uF	20%	50V
C11	2384123035	ELECTROLYTIC	SMH 35VNSN12000-30C		
C12	2250109047	ELECTROLYTIC	1uF	20%	50V
C13	2240100042	ELECTROLYTIC	10uF	20%	25V
C14	2250109047	ELECTROLYTIC	1uF	20%	50V
C15	2240100042	ELECTROLYTIC	10uF	20%	25V
C16	2384123035	ELECTROLYTIC	SMH 35VNSN12000-30C		
C17	2250109047	ELECTROLYTIC	1uF	20%	50V
C18	2240100042	ELECTROLYTIC	10uF	20%	25V
C19	2250109047	ELECTROLYTIC	1uF	20%	50V
C20	2240100042	ELECTROLYTIC	10uF	20%	25V
C21	2250100049	ELECTROLYTIC	10uF	20%	50V

—DIODES—

D1	3110145008	BRIDGE RECTIFIER	GBU8D	
D2	3110145008	BRIDGE RECTIFIER	GBU8D	
D3	3110145008	BRIDGE RECTIFIER	GBU8D	
D4	3110151003	DETECTOR	1S1887	
D5	3110151003	DETECTOR	1S1887	
D6	3120031000	ZENER	RD18EB	18V
D7	3120031000	ZENER	RD18EB	18V
D8	3110151003	DETECTOR	1S1887	
D9	3110151003	DETECTOR	1S1887	
D10	3110151003	DETECTOR	1S1887	
D11	3110151003	DETECTOR	1S1887	

—INTEGRATED CIRCUITS—

IC1	3200903005	REGULATOR	SI-3052V
IC2	3200903005	REGULATOR	SI-3052V
IC3	3200905009	REGULATOR	SI-3152V
IC4	3200905009	REGULATOR	SI-3152V
IC5	3200905009	REGULATOR	SI-3152V
IC6	3200905009	REGULATOR	SI-3152V

—MISCELLANEOUS—

P1	4416003016	VH CONNECTOR TOP	ENTRY	B3P-VH
P2	4416006012	VH CONNECTOR TOP	ENTRY	B6P-VH
P3	4413004010	XH CONNECTOR TOP	ENTRY	B4B-XH-A
P4	4413008018	XH CONNECTOR TOP	ENTRY	B8B-XH-A
P5	4413004010	XH CONNECTOR TOP	ENTRY	B4B-XH-A
P7	4413006014	XH CONNECTOR TOP	ENTRY	B6B-XH-A
P8	4413004010	XH CONNECTOR TOP	ENTRY	B4B-XH-A
P9	4413005012	XH CONNECTOR TOP	ENTRY	B5B-XH-A
P10	4413003018	XH CONNECTOR TOP	ENTRY	B3B-XH-A

TP1	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP2	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP3	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP4	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP5	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP6	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP7	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP8	4384003006	TP TERMINAL	LC-2-S(ORANGE)
TP9	4384003006	TP TERMINAL	LC-2-S(ORANGE)

***** RF LEVEL BOARD T-4674 *****

−RESISTORS−					
R1	1463002005	METAL FILM	30K OHM	1%	1/6W
R2	1462701005	METAL FILM	2.7K OHM	1%	1/6W
R3	1463002005	METAL FILM	30K OHM	1%	1/6W
R4	1462701005	METAL FILM	2.7K OHM	1%	1/6W
R5	1000221005	CARBON FILM	220 OHM	5%	1/6W
R6	1000560007	CARBON FILM	56 OHM	5%	1/6W
R7	1000221005	CARBON FILM	220 OHM	5%	1/6W
−CAPACITORS−					
C1	2010102012	CERAMIC	1000pF	10%	50V
C2	2010102012	CERAMIC	1000pF	10%	50V
C3	2010102012	CERAMIC	1000pF	10%	50V
C4	2010102012	CERAMIC	1000pF	10%	50V
C5	2010103014	CERAMIC	0.01uF	80/-20%	50V
C6	2010102012	CERAMIC	1000pF	10%	50V
C7	2010102012	CERAMIC	1000pF	10%	50V
C8	2010102012	CERAMIC	1000pF	10%	50V
C9	2010102012	CERAMIC	1000pF	10%	50V
C10	2010102012	CERAMIC	1000pF	10%	50V
C11	2010102012	CERAMIC	1000pF	10%	50V
C12	2010102012	CERAMIC	1000pF	10%	50V
C13	2010102012	CERAMIC	1000pF	10%	50V
−DIODES−					
D1	3140021001	PIN	1SV80		
D2	3140021001	PIN	1SV80		
D3	3140021001	PIN	1SV80		
D4	3140021001	PIN	1SV80		
D5	3140021001	PIN	1SV80		
D6	3140021001	PIN	1SV80		
−COILS−					
L1	3930100031	CHOKE COIL	10uH	10%	
L2	3930479032	CHOKE COIL	4.7uH	10%	
L3	3930100031	CHOKE COIL	10uH	10%	
L4	3930479032	CHOKE COIL	4.7uH	10%	
L5	3930100031	CHOKE COIL	10uH	10%	
−CONNECTORS−					
J4	4310747001	CONNECTOR	BNC-080		
−MISCELLANEOUS−					
P2	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A		

P3	4413003018	XH CONNECTOR TOP ENTRY B3B-XH-A	

***** H.DERAY BOARD T-4767 *****

—VARIABLE RESISTORS—			
VR2	1940062001		20K OHM
—CONNECTORS—			
P2	4413510006	SB CONNECTOR	MB10P-90-24
JP1	1010000006	CARBON FILM	0 OHM
J1	4314085023	CONNECTOR	DELC-J9SAF-10L6
P1	4413008027	XH CONNECTOR SIDE ENTRY	S8B-XH-A
VR1	1816000116	CARBON FILM 10K OHM 20% 1/20W	
D1	3130063000	LED	TLG164
LF1	3610060000	LINE FILTER	ZUB2203H-L
T1	3800631024	POWER TRANSFORMER	J-631B
S1	4020138009	PUSH	ESB-70702V
J1	4310747001	CONNECTOR	BNC-080
J2	4310747001	CONNECTOR	BNC-080
P1	4317364007	HKP CONNECTOR	HKP-14M1
FH1	4371009003	FUSE HOLDER	FH-032(6.35X31.8)
	4513101016	KNOB	L10S-G-3.3
	4513341025	KNOB	E-614-2 (JOG DIAL)
	4515024007	KEYTOP S	LIGHT GRAY
	4515026001	KEYTOP S	LIGHT GRAY LED
	4515030002	KEYTOP M	LIGHT GRAY LED
	4515039000	KEYTOP S	LIGHT GRAY V-ARROW
	4515040005	KEYTOP S	LIGHT GRAY H-ARROW
	4515046016	PUSH BUTTON	E-618-1 LIGHT GRAY
	4515047018	BOTTOM FRAME	E-619-1 LIGHT GRAY
	8041015009	LCD DISPLAY	GMD2022ALY

***** RF BOARD T-5203 *****

—RESISTORS—						
R1	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R2	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R3	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R4	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R5	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R6	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W
R7	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R8	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R9	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R10	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R11	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W
R12	1660682506	METAL GLAZE	CHIP	6.8K OHM	5%	1/8W
R13	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R14	1660391505	METAL GLAZE	CHIP	390 OHM	5%	1/8W
R15	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R16	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R17	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W
R18	1660562506	METAL GLAZE	CHIP	5.6K OHM	5%	1/8W
R19	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R20	1660391505	METAL GLAZE	CHIP	390 OHM	5%	1/8W
R21	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W

R22	1660561504	METAL	GLAZE	CHIP	560	OHM	5% 1/8W
R23	1660222502	METAL	GLAZE	CHIP	2.2K	OHM	5% 1/8W
R24	1660103504	METAL	GLAZE	CHIP	10K	OHM	5% 1/8W
R25	1660561504	METAL	GLAZE	CHIP	560	OHM	5% 1/8W
R26	1660103504	METAL	GLAZE	CHIP	10K	OHM	5% 1/8W
R27	1660562506	METAL	GLAZE	CHIP	5.6K	OHM	5% 1/8W
R28	1660222502	METAL	GLAZE	CHIP	2.2K	OHM	5% 1/8W
R29	1660561504	METAL	GLAZE	CHIP	560	OHM	5% 1/8W
R30	1660222502	METAL	GLAZE	CHIP	2.2K	OHM	5% 1/8W
R31	1660223504	METAL	GLAZE	CHIP	22K	OHM	5% 1/8W
R32	1660223504	METAL	GLAZE	CHIP	22K	OHM	5% 1/8W
R100	1663000300	METAL	GLAZE	CHIP	300	OHM	1% 1/8W
R101	1661809308	METAL	GLAZE	CHIP	18	OHM	1% 1/8W
R102	1663000300	METAL	GLAZE	CHIP	300	OHM	1% 1/8W
R103	1660471503	METAL	GLAZE	CHIP	470	OHM	5% 1/8W
R104	1660102502	METAL	GLAZE	CHIP	1K	OHM	5% 1/8W
R105	1660822506	METAL	GLAZE	CHIP	8.2K	OHM	5% 1/8W
R106	1660123500	METAL	GLAZE	CHIP	12K	OHM	5% 1/8W
R107	1660472505	METAL	GLAZE	CHIP	4.7K	OHM	5% 1/8W
R108	1660471503	METAL	GLAZE	CHIP	470	OHM	5% 1/8W
R109	1661500308	METAL	GLAZE	CHIP	150	OHM	1% 1/8W
R110	1663609302	METAL	GLAZE	CHIP	36	OHM	1% 1/8W
R111	1661500308	METAL	GLAZE	CHIP	150	OHM	1% 1/8W
R112	1660820502	METAL	GLAZE	CHIP	82	OHM	5% 1/8W
R113	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R114	1660223504	METAL	GLAZE	CHIP	22K	OHM	5% 1/8W
R115	1660153509	METAL	GLAZE	CHIP	15K	OHM	5% 1/8W
R116	1660223504	METAL	GLAZE	CHIP	22K	OHM	5% 1/8W
R117	1650475504	METAL	GLAZE	CHIP	4.7M	OHM	5% 1/10W
R118	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R119	1661809308	METAL	GLAZE	CHIP	18	OHM	1% 1/8W
R120	1661809308	METAL	GLAZE	CHIP	18	OHM	1% 1/8W
R121	1580101001	METAL	FILM		100	OHM	5% 1W
R200	1667509302	METAL	GLAZE	CHIP	75	OHM	1% 1/8W
R201	1667509302	METAL	GLAZE	CHIP	75	OHM	1% 1/8W
R202	1660103504	METAL	GLAZE	CHIP	10K	OHM	5% 1/8W
R203	1660104506	METAL	GLAZE	CHIP	100K	OHM	5% 1/8W
R204	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R205	1660332509	METAL	GLAZE	CHIP	3.3K	OHM	5% 1/8W
R206	1660472505	METAL	GLAZE	CHIP	4.7K	OHM	5% 1/8W
R207	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R208	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R209	1660392507	METAL	GLAZE	CHIP	3.9K	OHM	5% 1/8W
R210	1661001300	METAL	GLAZE	CHIP	1K	OHM	1% 1/8W
R211	1665100306	METAL	GLAZE	CHIP	510	OHM	1% 1/8W
R212	1661001300	METAL	GLAZE	CHIP	1K	OHM	1% 1/8W
R213	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R214	1660222502	METAL	GLAZE	CHIP	2.2K	OHM	5% 1/8W
R215	1660472505	METAL	GLAZE	CHIP	4.7K	OHM	5% 1/8W
R216	1660222502	METAL	GLAZE	CHIP	2.2K	OHM	5% 1/8W
R217	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R218	1663001302	METAL	GLAZE	CHIP	3K	OHM	1% 1/8W
R219	1662401302	METAL	GLAZE	CHIP	2.4K	OHM	1% 1/10W
R220	1663001302	METAL	GLAZE	CHIP	3K	OHM	1% 1/8W
R221	1662401302	METAL	GLAZE	CHIP	2.4K	OHM	1% 1/10W
R226	1660101500	METAL	GLA2E	CHIP	100	OHM	5% 1/8W
R227	1661001300	METAL	GLAZE	CHIP	1K	OHM	1% 1/8W
R228	1660221500	METAL	GLAZE	CHIP	220	OHM	5% 1/8W

R229	1661001300	METAL GLAZE	CHIP	1K OHM	1%	1/8W
R230	1660331507	METAL GLAZE	CHIP	330 OHM	5%	1/8W
R231	1660101500	METAL GLA2E	CHIP	100 OHM	5%	1/8W
R232	1660101500	METAL GLA2E	CHIP	100 OHM	5%	1/8W
R233	1660472505	METAL GLAZE	CHIP	4.7K OHM	5%	1/8W
R234	1660562506	METAL GLAZE	CHIP	5.6K OHM	5%	1/8W
R236	1000100003	CARBON FILM		10 OHM	5%	1/6W
R237	1661000308	METAL GLAZE	CHIP	100 OHM	1%	1/10W
R238	1461809009	METAL FILM		18 OHM	1%	1/6W
R239	1661809308	METAL GLAZE	CHIP	18 OHM	1%	1/8W
R240	1661809308	METAL GLAZE	CHIP	18 OHM	1%	1/8W
R300	1660102502	METAL GLAZE	CHIP	1K OHM	5%	1/8W
R301	1660102502	METAL GLAZE	CHIP	1K OHM	5%	1/8W
R302	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R303	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R304	1660683508	METAL GLAZE	CHIP	68K OHM	5%	1/8W
R305	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R306	1660154501	METAL GLAZE	CHIP	150K OHM	5%	1/8W
R307	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R308	1660152507	METAL GLAZE	CHIP	1.5K OHM	5%	1/8W
R309	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R310	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R311	1660102502	METAL GLAZE	CHIP	1K OHM	5%	1/8W
R313	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R314	1660123500	METAL GLAZE	CHIP	12K OHM	5%	1/8W
R315	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R316	1660681504	METAL GLAZE	CHIP	680 OHM	5%	1/8W
R317	1660331507	METAL GLAZE	CHIP	330 OHM	5%	1/8W
R318	1660272507	METAL GLAZE	CHIP	2.7K OHM	5%	1/8W
R319	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R320	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W
R321	1660333501	METAL GLAZE	CHIP	33K OHM	5%	1/8W
R322	1660333501	METAL GLAZE	CHIP	33K OHM	5%	1/8W
R323	1660472505	METAL GLAZE	CHIP	4.7K OHM	5%	1/8W
R324	1660472505	METAL GLAZE	CHIP	4.7K OHM	5%	1/8W
R325	1660560502	METAL GLAZE	CHIP	56 OHM	5%	1/8W
R326	1667500304	METAL GLAZE	CHIP	750 OHM	1%	1/8W
R327	1660682506	METAL GLAZE	CHIP	6.8K OHM	5%	1/8W
R328	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R329	1660561504	METAL GLAZE	CHIP	560 OHM	5%	1/8W
R330	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R331	1661202300	METAL GLAZE	CHIP	12K OHM	1%	1/8W
R332	1000103009	CARBON FILM		10K OHM	5%	1/6W
R333	1660472505	METAL GLAZE	CHIP	4.7K OHM	5%	1/8W
R334	1660682506	METAL GLAZE	CHIP	6.8K OHM	5%	1/8W
R335	1000331002	CARBON FILM		330 OHM	5%	1/6W
R336	1660102502	METAL GLAZE	CHIP	1K OHM	5%	1/8W
R337	1000152002	CARBON FILM		1.5K OHM	5%	1/6W
R338	1660103504	METAL GLAZE	CHIP	10K OHM	5%	1/8W
R339	1660472505	METAL GLAZE	CHIP	4.7K OHM	5%	1/8W
R340	1661802304	METAL GLAZE	CHIP	18K OHM	1%	1/8W
R341	1660105508	METAL GLAZE	CHIP	1M OHM	5%	1/8W
R342	1660105508	METAL GLAZE	CHIP	1M OHM	5%	1/8W
R343	1663602308	METAL GLAZE	CHIP	36K OHM	5%	1/8W
R344	1661502302	METAL GLAZE	CHIP	15K OHM	1%	1/8W
R345	1662701304	METAL GLAZE	CHIP	2.7K OHM	1%	1/8W
R346	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W
R347	1660222502	METAL GLAZE	CHIP	2.2K OHM	5%	1/8W

R348	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R349	1660223504	METAL GLAZE CHIP	22K OHM	5%	1/8W
R350	1660272507	METAL GLAZE CHIP	2.7K OHM	5%	1/8W
R400	1660153509	METAL GLAZE CHIP	15K OHM	5%	1/8W
R401	1651809301	METAL GLAZE CHIP	18 OHM	5%	1/10W
R402	1000682001	CARBON FILM	6.8K OHM	5%	1/6W
R403	1660184500	METAL GLAZE CHIP	180K OHM	5%	1/8W
R404	1660392507	METAL GLAZE CHIP	3.9K OHM	5%	1/8W
R405	1660103504	METAL GLAZE CHIP	10K OHM	5%	1/8W
R406	1660152507	METAL GLAZE CHIP	1.5K OHM	5%	1/8W
R407	1660153509	METAL GLAZE CHIP	15K OHM	5%	1/8W
R408	1660823508	METAL GLAZE CHIP	82K OHM	5%	1/10W
R409	1660153509	METAL GLAZE CHIP	15K OHM	5%	1/8W
R410	1000222007	CARBON FILM	2.2K OHM	5%	1/6W
R411	1660472505	METAL GLAZE CHIP	4.7K OHM	5%	1/8W
R412	1660102502	METAL GLAZE CHIP	1K OHM	5%	1/8W
RA400	1515473119	RESISTOR ARRAY	47K OHMX8	5%	1/8W
—VARIABLE RESISTORS—					
VR100	1711004024	METAL GLAZE	300 OHM	20%	1/3W
VR200	1711004079	METAL GLAZE	10K OHM	20%	1/3W
VR201	1711004079	METAL GLAZE	10K OHM	20%	1/3W
—CAPACITORS—					
C1	2680102000	CERAMIC CHIP	1000pF	10%	50V
C2	2680102000	CERAMIC CHIP	1000pF	10%	50V
C3	2010103014	CERAMIC	0.01uF	80/-20%	50V
C4	2680102000	CERAMIC CHIP	1000pF	10%	50V
C6	2680102000	CERAMIC CHIP	1000pF	10%	50V
C7	2680102000	CERAMIC CHIP	1000pF	10%	50V
C8	2010103014	CERAMIC	0.01uF	80/-20%	50V
C9	2680102000	CERAMIC CHIP	1000pF	10%	50V
C10	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C11	2682180608	CERAMIC	18pF	10%	50V
C12	2680330003	ELECTROLYTIC CHIP	33uF	10%	50V
C13	2010103014	CERAMIC	0.01uF	80/-20%	50V
C14	2680102000	CERAMIC CHIP	1000pF	10%	50V
C15	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C16	2682050605	CERAMIC CHIP	5pF	10%	50V
C17	2682270609	CERAMIC	27pF	10%	50V
C18	2010103014	CERAMIC	0.01uF	80/-20%	50V
C19	2680102000	CERAMIC CHIP	1000pF	10%	50V
C20	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C21	2680040004	CERAMIC CHIP	4pF	0.5pF	50V
C22	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V
C23	2010103014	CERAMIC	0.01uF	80/-20%	50V
C24	2680102000	CERAMIC CHIP	1000pF	10%	50V
C25	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C26	2682150609	CERAMIC CHIP	15pF	10%	50V
C27	2010102012	CERAMIC	1000pF	10%	50V
C28	2010102012	CERAMIC	1000pF	10%	50V
C29	2220220048	ELECTROLYTIC	22uF	20%	10V
C100	2680102000	CERAMIC CHIP	1000pF	10%	50V
C101	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C102	2680102000	CERAMIC CHIP	1000pF	10%	50V
C103	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C104	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C105	2680103002	CERAMIC CHIP	0.01uF	10%	50V

C106	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C107	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C108	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V	
C109	2010102012	CERAMIC	1000pF	10%	50V	
C110	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C111	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C112	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C113	2680151003	CERAMIC CHIP	150pF	10%	50V	
C114	2680330003	ELECTROLYTIC CHIP	33uF	10%	50V	
C115	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C116	2010102012	CERAMIC	1000pF	10%	50V	
C116	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C117	2220220048	ELECTROLYTIC	22uF	20%	10V	
C200	2230470048	ELECTROLYTIC	47uF	20%	16V	
C201	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C202	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C203	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C204	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C205	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C206	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C207	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C208	2682050605	CERAMIC CHIP	5pF	10%	50V	
C209	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C210	2010102012	CERAMIC	1000pF	10%	50V	
C211	2010102012	CERAMIC	1000pF	10%	50V	
C212	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C213	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C214	2010102012	CERAMIC	1000pF	10%	50V	
C215	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C216	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C217	2010102012	CERAMIC	1000pF	10%	50V	
C218	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C219	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C220	2250109047	ELECTROLYTIC	1uF	20%	50V	
C221	2010102012	CERAMIC	1000pF	10%	50V	
C222	2010102012	CERAMIC	1000pF	10%	50V	
C223	2680070003	ELECTROLYTIC CHIP	7uF		50V	
C224	2682050605	CERAMIC CHIP	5pF	10%	50V	
C225	2682030104	CELAMIC CHIP	3pF	10%	50V	
C226	2682030104	CELAMIC CHIP	3pF	10%	50V	
C300	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C301	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C302	2230470048	ELECTROLYTIC	47uF	20%	16V	
C303	2323100044	ELECTROLYTIC	10uF	20%	25V	BP
C304	2682101606	CERAMIC CHIP	100pF	10%	50V	
C305	2323220044	ELECTROLYTIC	22uF	20%	25V	BP
C306	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C307	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C308	2433475703	ELECTROLYTIC CHIP	4.7uF	20%	10V	
C309	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C310	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C311	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C312	2682101606	CERAMIC CHIP	100pF	10%	50V	
C313	2680331601	CERAMIC	330pF	10%	50V	
C314	2680151003	CERAMIC CHIP	150pF	10%	50V	
C315	2010103014	CERAMIC	0.01uF	80/-20%	50V	
C316	2682030104	CELAMIC CHIP	3pF	10%	50V	
C317	2680102000	CERAMIC CHIP	1000pF	10%	50V	

C318	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C319	2682150609	CERAMIC CHIP	15pF	10%	50V	
C320	2682360509	CELAMIC CHIP	36pF	10%	50V	
C321	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C322	2682100200	CERAMIC CHIP	10pF	0.5pF	50V	
C323	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C324	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C325	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C326	2322100048	ELECTROLYTIC	10uF	20%	16V	BP
C327	2682030104	CELAMIC CHIP	3pF	10%	50V	
C328	2220220048	ELECTROLYTIC	22uF	20%	10V	
C329	2325229044	ELECTROLYTIC	2.2uF	20%	50V	BP
C330	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C400	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C401	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C402	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C403	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C404	2680102000	CERAMIC CHIP	1000pF	10%	50V	
C405	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C406	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C407	2325479047	ELECTROLYTIC	4.7uF	20%	50V	BP
C408	2610474026	METAL FILM	0.047uF	5%	63V	
C409	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C410	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C411	2240221044	ELECTROLYTIC	220uF	20%	25V	
C412	2250229047	ELECTROLYTIC	2.2uF	20%	50V	
C413	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C414	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C415	2220221040	ELECTROLYTIC	220uF	20%	10V	
C416	2240221044	ELECTROLYTIC	220uF	20%	25V	
C417	2250100049	ELECTROLYTIC	10uF	20%	50V	
C418	2240221044	ELECTROLYTIC	220uF	20%	25V	
C419	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V	
C420	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V	
C421	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C422	2680103002	CERAMIC CHIP	0.01uF	10%	50V	
C423	2682100200	CERAMIC CHIP	10pF	0.5pF	50V	

-VARIABLE CAPACITORS-

VC300	2910065005	CERAMIC	2222 808 23209

-TRANSISTORS-

Q1	3032757007	NPN CHIP	2SC2757-T1B T33
Q2	3032712005	NPN CHIP	2SC2712-O or Y
Q3	3032757007	NPN CHIP	2SC2757-T1B T33
Q4	3032712005	NPN CHIP	2SC2712-O or Y
Q5	3032757007	NPN CHIP	2SC2757-T1B T33
Q6	3032712005	NPN CHIP	2SC2712-O or Y
Q7	3033841002	NPN CHIP	2SC3841(T63)
Q8	3032712005	NPN CHIP	2SC2712-O or Y
Q9	3033841002	NPN CHIP	2SC3841(T63)
Q10	3032712005	NPN CHIP	2SC2712-O or Y
Q11	3032712005	NPN CHIP	2SC2712-O or Y
Q200	3032712005	NPN CHIP	2SC2712-O or Y
Q201	3032712005	NPN CHIP	2SC2712-O or Y
Q202	3011162015	PNP CHIP	2SA1162-O or Y
Q203	3032712005	NPN CHIP	2SC2712-O or Y
Q204	3032712005	NPN CHIP	2SC2712-O or Y

Q205	3011162015	PNP CHIP	2SA1162-O or Y
Q206	3090045002	TRANSISTOR ARRAY	uPA101G
Q207	3090045002	TRANSISTOR ARRAY	uPA101G
Q300	3032712005	NPN CHIP	2SC2712-O or Y
Q301	3032712005	NPN CHIP	2SC2712-O or Y
Q302	3032712005	NPN CHIP	2SC2712-O or Y
Q303	3032712005	NPN CHIP	2SC2712-O or Y
Q304	3011162015	PNP CHIP	2SA1162-O or Y
Q305	3011162015	PNP CHIP	2SA1162-O or Y
Q306	3032712005	NPN CHIP	2SC2712-O or Y
Q307	3032712005	NPN CHIP	2SC2712-O or Y
Q308	3032712005	NPN CHIP	2SC2712-O or Y
Q309	3032712005	NPN CHIP	2SC2712-O or Y

-DIODES-

D1	3140030002	VARICAP	SVC 203
D2	3140030002	VARICAP	SVC 203
D3	3143009009	VARICAP CHIP	1SV167-T-1
D4	3143009009	VARICAP CHIP	1SV167-T-1
D5	3143009009	VARICAP CHIP	1SV167-T-1
D6	3143009009	VARICAP CHIP	1SV167-T-1
D7	3143002005	VARICAP	1SV202-14TR
D8	3143002005	VARICAP	1SV202-14TR
D9	3143002005	VARICAP	1SV202-14TR
D10	3143002005	VARICAP	1SV202-14TR
D11	3143002005	VARICAP	1SV202-14TR
D12	3143002005	VARICAP	1SV202-14TR
D100	3140021001	PIN	1SV80
D101	3140021001	PIN	1SV80
D102	3140021001	PIN	1SV80
D103	3110070003	DETECTOR	1SS99
D200	3113004008	DETECTOR CHIP	MA151K
D300	3140034000	VARICAP	KV1226
D302	3113004008	DETECTOR CHIP	MA151K
D303	3113005000	DETECTOR CHIP	MA153-TW
D304	3113005000	DETECTOR CHIP	MA153-TW
D305	3110110009	DETECTOR	GMB01
D306	3110110009	DETECTOR	GMB01
D400	3113004008	DETECTOR CHIP	MA151K
D401	3110110009	DETECTOR	GMB01
D402	3110110009	DETECTOR	GMB01

-INTEGRATED CIRCUITS-

IC100	3205306007	WIDE BAND AMP	uPC1654A
IC101	3195301002	WIDE BAND AMP	NPC1676G0T1
IC102	3201018017	SINGLE OP AMP	081
IC300	3310053999	CMOS	4053B
IC301	3201016013	SINGLE OP AMP	071
IC302	3404002007	PLL FREQ SYNTHE	X-7925B
IC303	3205500012	BAL MODULATOR	NJM1496D
IC400	3390011009	PRESCALER	TD6105AP
IC401	3404002007	PLL FREQ SYNTHE	X-7925B
IC401	3201117000	DUAL OP AMP	M5220P
IC403	3430094005	CMOS	TC74HC4094P
IC404	3430094005	CMOS	TC74HC4094P
IC405	3200400027	REGURATOR	NJM79L05A

-COILS-

L1	3960828005	COIL	0.82uH	10%	
L2	3930100031	CHOKE COIL	10uH	10%	
L3	3930479032	CHOKE COIL	4.7uH	10%	
L4	3900673028	COIL	L-673-6		
L5	3900675040	COIL	L-675-3		
L6	3930479032	CHOKE COIL	4.7uH	10%	
L7	3900673028	COIL	L-673-6		
L8	3900673028	COIL	L-673-6		
L9	3930479032	CHOKE COIL	4.7uH	10%	
L10	3900673028	COIL	L-673-6		
L11	3900673000	COIL	L-673-2		
L12	3930479032	CHOKE COIL	4.7uH	10%	
L13	3900952004	COIL	L-952		
L15	3930479032	CHOKE COIL	4.7uH	10%	
L16	3900673028	COIL	L-673-6		
L17	3930100031	CHOKE COIL	10uH	10%	
L100	3930100031	CHOKE COIL	10uH	10%	
L200	3930100031	CHOKE COIL	10uH	10%	
L201	3930150036	COIL	15uH	10%	
L202	3930100031	CHOKE COIL	10uH	10%	
L203	3930100031	CHOKE COIL	10uH	10%	
L204	3930100031	CHOKE COIL	10uH	10%	
L300	3900892002	COIL	L-892		
L301	3930470034	CHOKE COIL	47uH	10%	
L302	3923221007	CHOKE COIL CHIP	220uH	10%	
L400	3992008000	CHOKE COIL	1mH	20%	0.3A
L401	3992008000	CHOKE COIL	1mH	20%	0.3A
L402	3992008000	CHOKE COIL	1mH	20%	0.3A
L403	3930102035	CHOKE COIL	1mH		
-CONNECTORS-					
J200	4310151008	CONNECTOR	SML 010		
J201	4310151008	CONNECTOR	SML 010		
J202	4310203001	CONNECTOR	G-38		
J301	4310151008	CONNECTOR	SML 010		
-MISCELLANEOUS-					
K200	4080053012	RELAY	DS1E-S-DC5V(AG231944		
P300	4413004010	XH CONNECTOR TOP ENTRY	B4B-XH-A		
P400	4413008018	XH CONNECTOR TOP ENTRY	B8B-XH-A		
P401	4413005012	XH CONNECTOR TOP ENTRY	B5B-XH-A		
P402	4413002016	XH CONNECTOR SIDE ENTRY	B2B-XH-A		
FB200	3890017001	FERRITE BEAD	L1RH0303 H=1		
TP1	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP2	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP100	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP101	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP102	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP103	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP300	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP301	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
TP302	4384003006	TP TERMINAL	LC-2-S(ORANGE)		
X300	3510034001	CRYSTAL	LN-27-0008	10.000MHz	

***** SUB PHASE BOARD T-4608 *****

-RESISTORS-

JP1	1650000002	METAL GLAZE CHIP	0 OHM		
R1	1650223507	METAL GLAZE CHIP	22K OHM	5%	1/10W
R2	1650223507	METAL GLAZE CHIP	22K OHM	5%	1/10W
R3	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R4	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R5	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R6	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R7	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R8	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R9	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R10	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R11	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R12	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R13	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R14	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R15	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R16	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R17	1650103507	METAL GLAZE CHIP	10K OHM	5%	1/10W
R18	1650472508	METAL GLAZE CHIP	4.7K OHM	5%	1/10W
R19	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
R20	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
R21	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
—VARIABLE RESISTORS—					
VR1	1815028002	VB16L4(7X5)(PH2D)	GN15S-15C 5KX3		
—CAPACITORS—					
C1	2681473809	CERAMIC CHIP	0.047uF	10%	50V
C2	2681103604	CERAMIC CHIP	0.01uF	10%	50V
C3	2681121606	CELAMIC CHIP	120pF	10%	50V
C4	2681121606	CELAMIC CHIP	120pF	10%	50V
C5	2681121606	CELAMIC CHIP	120pF	10%	50V
C6	2681103604	CERAMIC CHIP	0.01uF	10%	50V
C7	2681330605	CERAMIC CHIP	33pF	10%	50V
C8	2681330605	CERAMIC CHIP	33pF	10%	50V
C9	2681330605	CERAMIC CHIP	33pF	10%	50V
—TRANSISTORS—					
Q1	3032712005	NPN CHIP	2SC2712-O or Y		
Q2	3032712005	NPN CHIP	2SC2712-O or Y		
Q3	3032712005	NPN CHIP	2SC2712-O or Y		
Q4	3032712005	NPN CHIP	2SC2712-O or Y		
Q5	3032712005	NPN CHIP	2SC2712-O or Y		
Q6	3032712005	NPN CHIP	2SC2712-O or Y		
Q7	3032712005	NPN CHIP	2SC2712-O or Y		
Q8	3032712005	NPN CHIP	2SC2712-O or Y		
—COILS—					
L1	3930270036	CHOKE COIL	27uH	10%	
L2	3930270036	CHOKE COIL	27uH	10%	
L3	3930270036	CHOKE COIL	27uH	10%	
—MISCELLANEOUS—					
P1	4413009010	XH CONNECTOR TOP ENTRY B9B-XH-A			

***** MB CNTL D/A BOARD T-4610 *****

—RESISTORS—						
R1	1651802307	METAL GLAZE	CHIP	18K OHM	1%	1/10W
R2	1651000301	METAL GLAZE	CHIP	100 OHM	1%	1/10W
R3	1659101305	MATAL GLAZE	CHIP	9.1K OHM	1%	1/10W
R4	1653000303	METAL GLAZE	CHIP	300 OHM	1%	1/10W
R5	1654701309	METAL GLAZE	CHIP	4.7K OHM	1%	1/10W
R6	1650270506	METAL GLAZE	CHIP	27 OHM	5%	1/10W
R7	1656801305	METAL GLAZE	CHIP	6.8K OHM	1%	1/10W
R8	1650000002	METAL GLAZE	CHIP	0 OHM		
R9	1655601301	METAL GLAZE	CHIP	5.6K OHM	1%	1/10W
R10	1651000301	METAL GLAZE	CHIP	100 OHM	1%	1/10W
R11	1651201301	METAL GLAZE	CHIP	1.2K OHM	1%	1/10W
R12	1650000002	METAL GLAZE	CHIP	0 OHM		
—TRANSISTORS—						
Q1	3011226006	PNP CHIP		2SA1226-3 or 4		
Q2	3011226006	PNP CHIP		2SA1226-3 or 4		
Q3	3011226006	PNP CHIP		2SA1226-3 or 4		
Q4	3011226006	PNP CHIP		2SA1226-3 or 4		
Q5	3011226006	PNP CHIP		2SA1226-3 or 4		
Q6	3011226006	PNP CHIP		2SA1226-3 or 4		
—DIODES—						
D1	3113002004	DETECTOR CHIP		MA151WK DUAL		
D2	3113002004	DETECTOR CHIP		MA151WK DUAL		
D3	3113002004	DETECTOR CHIP		MA151WK DUAL		
D4	3113002004	DETECTOR CHIP		MA151WK DUAL		
D5	3113002004	DETECTOR CHIP		MA151WK DUAL		
D6	3113002004	DETECTOR CHIP		MA151WK DUAL		
—MISCELLANEOUS—						
P1	4413515006	SB CONNECTOR		MB15P-90-24		

***** CHROMA D/A BOARD T-4613 *****

—RESISTORS—						
JP1	1650000002	METAL GLAZE	CHIP	0 OHM		
JP2	1650000002	METAL GLAZE	CHIP	0 OHM		
JP3	1650000002	METAL GLAZE	CHIP	0 OHM		
JP4	1650000002	METAL GLAZE	CHIP	0 OHM		
JP5	1650000002	METAL GLAZE	CHIP	0 OHM		
JP6	1650000002	METAL GLAZE	CHIP	0 OHM		
JP7	1650000002	METAL GLAZE	CHIP	0 OHM		
JP8	1650000002	METAL GLAZE	CHIP	0 OHM		
JP9	1650000002	METAL GLAZE	CHIP	0 OHM		
JP10	1650000002	METAL GLAZE	CHIP	0 OHM		
JP11	1650000002	METAL GLAZE	CHIP	0 OHM		
JP12	1650000002	METAL GLAZE	CHIP	0 OHM		
JP13	1650000002	METAL GLAZE	CHIP	0 OHM		
JP14	1650000002	METAL GLAZE	CHIP	0 OHM		
JP15	1650000002	METAL GLAZE	CHIP	0 OHM		
JP16	1650000002	METAL GLAZE	CHIP	0 OHM		
JP17	1650000002	METAL GLAZE	CHIP	0 OHM		
JP18	1650000002	METAL GLAZE	CHIP	0 OHM		
JP19	1650000002	METAL GLAZE	CHIP	0 OHM		
JP20	1650000002	METAL GLAZE	CHIP	0 OHM		
R30	1653601309	METAL GLAZE	CHIP	3.6K OHM	1%	1/10W

R31	1651200309	METAL GLAZE	CHIP	120 OHM	1%	1/10W
R32	1651502305	METAL GLAZE	CHIP	15K OHM	1%	1/10W
R33	1655600309	METAL GLAZE	CHIP	560 OHM	1%	1/10W
R34	1654301303	METAL GLAZE	CHIP	4.3K OHM	1%	1/10W
R35	1651000301	METAL GLAZE	CHIP	100 OHM	1%	1/10W
R36	1657501309	METAL GLAZE	CHIP	7.5K OHM	1%	1/10W
R37	1653900309	METAL GLAZE	CHIP	390 OHM	1%	1/10W
R38	1652202309	METAL GLAZE	CHIP	22K OHM	1%	1/10W
R39	1651001303	METAL GLAZE	CHIP	1K OHM	1%	1/10W
R40	1655101301	METAL GLAZE	CHIP	5.1K OHM	1%	1/10W
R41	1651500301	METAL GLAZE	CHIP	150 OHM	1%	1/10W
R42	1657501309	METAL GLAZE	CHIP	7.5K OHM	1%	1/10W
R43	1654300301	METAL GLAZE	CHIP	430 OHM	1%	1/10W
R44	1657501309	METAL GLAZE	CHIP	7.5K OHM	1%	1/10W
R45	1654300301	METAL GLAZE	CHIP	430 OHM	1%	1/10W
R46	1657501309	METAL GLAZE	CHIP	7.5K OHM	1%	1/10W
R47	1654300301	METAL GLAZE	CHIP	430 OHM	1%	1/10W
R48	1657501309	METAL GLAZE	CHIP	7.5K OHM	1%	1/10W
R49	1654300301	METAL GLAZE	CHIP	430 OHM	1%	1/10W
R50	1658201303	METAL GLAZE	CHIP	8.2K OHM	1%	1/10W
R51	1655600309	METAL GLAZE	CHIP	560 OHM	1%	1/10W
R54	1651302307	METAL GLAZE	CHIP	13K OHM	1%	1/10W
R55	1651501303	METAL GLAZE	CHIP	1.5K OHM	1%	1/10W
R56	1659101305	MATAL GLAZE	CHIP	9.1K OHM	1%	1/10W
R57	1653300305	METAL GLAZE	CHIP	330 OHM	1%	1/10W
R58	1659101305	MATAL GLAZE	CHIP	9.1K OHM	1%	1/10W
R59	1653300305	METAL GLAZE	CHIP	330 OHM	1%	1/10W
R60	1651302307	METAL GLAZE	CHIP	13K OHM	1%	1/10W
R61	1651501303	METAL GLAZE	CHIP	1.5K OHM	1%	1/10W
R62	1659101305	MATAL GLAZE	CHIP	9.1K OHM	1%	1/10W
R63	1653600307	METAL GLAZE	CHIP	360 OHM	1%	1/10W

—TRANSISTORS—

Q30	3011226006	PNP	CHIP	2SA1226-3 or 4
Q31	3011226006	PNP	CHIP	2SA1226-3 or 4
Q32	3011226006	PNP	CHIP	2SA1226-3 or 4
Q33	3011226006	PNP	CHIP	2SA1226-3 or 4
Q34	3011226006	PNP	CHIP	2SA1226-3 or 4
Q35	3011226006	PNP	CHIP	2SA1226-3 or 4
Q36	3011226006	PNP	CHIP	2SA1226-3 or 4
Q37	3011226006	PNP	CHIP	2SA1226-3 or 4
Q38	3011226006	PNP	CHIP	2SA1226-3 or 4
Q39	3011226006	PNP	CHIP	2SA1226-3 or 4
Q40	3011226006	PNP	CHIP	2SA1226-3 or 4
Q42	3011226006	PNP	CHIP	2SA1226-3 or 4
Q43	3011226006	PNP	CHIP	2SA1226-3 or 4
Q44	3011226006	PNP	CHIP	2SA1226-3 or 4
Q45	3011226006	PNP	CHIP	2SA1226-3 or 4
Q46	3011226006	PNP	CHIP	2SA1226-3 or 4

—DIODES—

D30	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D31	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D32	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D33	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D34	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D35	3113002004	DETECTOR	CHIP	MA151WK	DUAL
D36	3113002004	DETECTOR	CHIP	MA151WK	DUAL

D37	3113002004	DETECTOR CHIP	MA151WK DUAL
D39	3113002004	DETECTOR CHIP	MA151WK DUAL
D40	3113002004	DETECTOR CHIP	MA151WK DUAL
D41	3113002004	DETECTOR CHIP	MA151WK DUAL

--MISCELLANEOUS--

P30	4413520009	SB CONNECTOR	MB20P-90-24

***** Y D/A BOARD T-4614 *****

--RESISTORS--

R100	1652701307	METAL GLAZE	CHIP	2.7K OHM	1%	1/10W
R101	1655609307	METAL GLAZE	CHIP	56 OHM	5%	1/10W
R102	1653601309	METAL GLAZE	CHIP	3.6K OHM	1%	1/10W
R103	1651100305	METAL GLAZE	CHIP	110 OHM	1%	1/10W
R104	1655101301	METAL GLAZE	CHIP	5.1K OHM	1%	1/10W
R105	1654700307	METAL GLAZE	CHIP	470 OHM	5%	1/10W
R106	1656802307	METAL GLAZE	CHIP	68K OHM	5%	1/10W
R107	1651501303	METAL GLAZE	CHIP	1.5K OHM	1%	1/10W
R108	1651202303	METAL GLAZE	CHIP	12K OHM	1%	1/10W
R109	1654700307	METAL GLAZE	CHIP	470 OHM	5%	1/10W
R110	1656201301	METAL GLAZE	CHIP	6.2K OHM	1%	1/10W
R111	1651500301	METAL GLAZE	CHIP	150 OHM	1%	1/10W
R112	1653002307	METAL GLAZE	CHIP	30K OHM	1%	1/10W
R113	1652701307	METAL GLAZE	CHIP	2.7K OHM	1%	1/10W
R114	1652702309	METAL GLAZE	CHIP	27K OHM	1%	1/10W
R115	1658200301	METAL GLAZE	CHIP	820 OHM	1%	1/10W
R116	1651302307	METAL GLAZE	CHIP	13K OHM	1%	1/10W
R117	1659100303	METAL GLAZE	CHIP	910 OHM	1%	1/10W
R118	1656801305	METAL GLAZE	CHIP	6.8K OHM	1%	1/10W
R119	1651500301	METAL GLAZE	CHIP	150 OHM	1%	1/10W
R120	1653301307	METAL GLAZE	CHIP	3.3K OHM	1%	1/10W
R121	1651800303	METAL GLAZE	CHIP	180 OHM	1%	1/10W
R122	1656802307	METAL GLAZE	CHIP	68K OHM	5%	1/10W
R123	1651501303	METAL GLAZE	CHIP	1.5K OHM	1%	1/10W
R124	1654701309	METAL GLAZE	CHIP	4.7K OHM	1%	1/10W
R125	1650000002	METAL GLAZE	CHIP	0 OHM		

--TRANSISTORS--

Q100	3011226006	PNP CHIP	2SA1226-3 or 4
Q101	3011226006	PNP CHIP	2SA1226-3 or 4
Q102	3011226006	PNP CHIP	2SA1226-3 or 4
Q103	3011226006	PNP CHIP	2SA1226-3 or 4
Q104	3011226006	PNP CHIP	2SA1226-3 or 4
Q105	3011226006	PNP CHIP	2SA1226-3 or 4
Q106	3011226006	PNP CHIP	2SA1226-3 or 4
Q107	3011226006	PNP CHIP	2SA1226-3 or 4
Q108	3011226006	PNP CHIP	2SA1226-3 or 4
Q109	3011226006	PNP CHIP	2SA1226-3 or 4
Q110	3011226006	PNP CHIP	2SA1226-3 or 4
Q111	3011226006	PNP CHIP	2SA1226-3 or 4
Q112	3011226006	PNP CHIP	2SA1226-3 or 4

--DIODES--

D100	3113008006	DETECTOR CHIP	MA704WK
D101	3113008006	DETECTOR CHIP	MA704WK
D102	3113008006	DETECTOR CHIP	MA704WK

D103	3113008006	DETECTOR CHIP	MA704WK
D104	3113008006	DETECTOR CHIP	MA704WK
D105	3113008006	DETECTOR CHIP	MA704WK
D106	3113008006	DETECTOR CHIP	MA704WK
D107	3113008006	DETECTOR CHIP	MA704WK
D108	3113008006	DETECTOR CHIP	MA704WK
D109	3113008006	DETECTOR CHIP	MA704WK
D110	3113008006	DETECTOR CHIP	MA704WK
D111	3113008006	DETECTOR CHIP	MA704WK
D112	3113008006	DETECTOR CHIP	MA704WK
D113	3113008006	DETECTOR CHIP	MA704WK
—MISCELLANEOUS—			
P100	4413520009	SB CONNECTOR	MB20P-90-24

***** CROMA D/A 2 BOARD T-4734 *****

—RESISTORS—					
R150	1651202303	METAL GLAZE CHIP	12K OHM	1%	1/10W
R151	1655609307	METAL GLAZE CHIP	56 OHM	1%	1/10W
R152	1651202303	METAL GLAZE CHIP	12K OHM	1%	1/10W
R153	1655609307	METAL GLAZE CHIP	56 OHM	1%	1/10W
R154	1659101305	MATAL GLAZE CHIP	9.1K OHM	1%	1/10W
R155	1653300305	METAL GLAZE CHIP	330 OHM	1%	1/10W
R156	1651302307	METAL GLAZE CHIP	13K OHM	1%	1/10W
R157	1651501303	METAL GLAZE CHIP	1.5K OHM	1%	1/10W
R158	1651302307	METAL GLAZE CHIP	13K OHM	1%	1/10W
R159	1651501303	METAL GLAZE CHIP	1.5K OHM	1%	1/10W
R160	1659101305	MATAL GLAZE CHIP	9.1K OHM	1%	1/10W
R161	1653300305	METAL GLAZE CHIP	330 OHM	1%	1/10W

—TRANSISTORS—			
Q150	3011226006	PNP CHIP	2SA1226-3 or 4
Q151	3011226006	PNP CHIP	2SA1226-3 or 4
Q152	3011226006	PNP CHIP	2SA1226-3 or 4
Q153	3011226006	PNP CHIP	2SA1226-3 or 4
Q154	3011226006	PNP CHIP	2SA1226-3 or 4
Q155	3011226006	PNP CHIP	2SA1226-3 or 4
—DIODES—			
D150	3113002004	DETECTOR CHIP	MA151WK DUAL
D151	3113002004	DETECTOR CHIP	MA151WK DUAL
D152	3113002004	DETECTOR CHIP	MA151WK DUAL
—MISCELLANEOUS—			
P150	4413515006	SB CONNECTOR	MB15P-90-24

***** PULSE AMP BOARD T-5165 *****

—RESISTORS—					
R1(5)	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R2(5)	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R3(5)	1650332502	METAL GLAZE CHIP	3.3K OHM	5%	1/10W
R4(5)	1650682509	METAL GLAZE CHIP	6.8K OHM	5%	1/10W
R5(5)	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
R6(5)	1650821507	METAL GLAZE CHIP	820 OHM	5%	1/10W

R7(5)	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R8(5)	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
R9(5)	1650479502	METAL GLAZE CHIP	4.7 OHM	5%	1/10W
R10(5)	1650479502	METAL GLAZE CHIP	4.7 OHM	5%	1/10W
R11(5)	1650000002	METAL GLAZE CHIP	0 OHM		
R12(5)	1650000002	METAL GLAZE CHIP	0 OHM		
—CAPACITORS—					
C1(5)	2681180602	CERAMIC CHIP	18pF	10%	50V
C2(5)	2681151605	CERAMIC CHIP	150pF	10%	50V
C3(5)	2681473809	CERAMIC CHIP	0.047uF	10%	50V
C4(5)	2681473809	CERAMIC CHIP	0.047uF	10%	50V
—TRANSISTORS—					
Q1(5)	3011162006	PNP CHIP	2SA1162-G		
Q2(5)	3011162006	PNP CHIP	2SA1162-G		
Q3(5)	3032712014	NPN CHIP	2SC2712-G		
Q4(5)	3032882000	NPN CHIP	2SC2882-Y-TE85R		
Q5(5)	3011202002	PNP CHIP	2SA1202-Y-TE85R		
—DIODES—					
D1(5)	3123010000	ZENER CHIP	02CZ6.2-TE85L		
D2(5)	3113007004	SWITCHING CHIP	1SS226-TE85L		
—COILS—					
L1(5)	3923560009	INDUCTOR CHIP	56uH	10%	
—MISCELLANEOUS—					
P1(5)	4413515006	SB CONNECTOR	MB15P-90-24		

***** Y. FILTER BOARD T-4771 *****

—RESISTORS—					
R1	1651001303	METAL GLAZE CHIP	1K OHM	1%	1/10W
R2	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R3	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R4	1650472508	METAL GLAZE CHIP	4.7K OHM	5%	1/10W
R5	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R6	1650472508	METAL GLAZE CHIP	4.7K OHM	5%	1/10W
R7	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R8	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
—CAPACITORS—					
C1	2520330003	CERAMIC	330pF	5%	500V
C2	2520150001	CERAMIC	150pF	5%	500V
C4	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C5	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C6	2120180008	MICA	18pF	10%	500V
C7	2520220006	CERAMIC	22pF	5%	500V
—TRANSISTORS—					
Q1	3032712005	NPN CHIP	2SC2712-O or Y		
Q2	3011226006	PNP CHIP	2SA1226-3 or 4		
—COILS—					
L1	3930560035	CHOKE COIL	56uH	10%	
L2	3930220031	CHOKE COIL	22uH	10%	

—MISCELLANEOUS—					
P1	4413515006	SB CONNECTOR	MB15P-90-24		
*** SECAM C FILT BOARD			T-5092 ***		
—RESISTORS—					
R1	1667509302	METAL GLAZE CHIP	75 OHM	1%	1/8W
R2	1670102509	METAL GLAZE CHIP	1.0K OHM	5%	1/2W
R3	1670222509	METAL GLAZE CHIP	2.2K OHM	5%	1/2W
R4	1660221500	METAL GLAZE CHIP	220 OHM	5%	1/8W
R5	1670152504	METAL GLAZE CHIP	1.5K OHM	5%	1/2W
R6	1660471503	METAL GLAZE CHIP	470 OHM	5%	1/8W
R7	1670222509	METAL GLAZE CHIP	2.2K OHM	5%	1/2W
R8	1660181504	METAL GLAZE CHIP	180 OHM	5%	1/8W
R9	1660560502	METAL GLAZE CHIP	56 OHM	5%	1/8W
R11	1670681501	METAL GLAZE CHIP	680 OHM	5%	1/2W
R13	1660181504	METAL GLAZE CHIP	180 OHM	5%	1/8W
R14	1661501300	METAL GLAZE CHIP	1.5K OHM	1%	1/8W
R15	1661501300	METAL GLAZE CHIP	1.5K OHM	1%	1/8W
R18	1660102502	METAL GLAZE CHIP	1K OHM	5%	1/8W
R20	1660101500	METAL GLA2E CHIP	100 OHM	5%	1/8W
R21	1660103504	METAL GLAZE CHIP	10K OHM	5%	1/8W
R22	1660102502	METAL GLAZE CHIP	1K OHM	5%	1/8W
R23	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R24	1667500304	METAL GLAZE CHIP	750 OHM	1%	1/8W
R25	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R26	1660122508	METAL GLAZE CHIP	1.2K OHM	5%	1/8W
R27	1660122508	METAL GLAZE CHIP	1.2K OHM	5%	1/8W
R28	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R29	1660221500	METAL GLAZE CHIP	220 OHM	5%	1/8W
R30	1660101500	METAL GLA2E CHIP	100 OHM	5%	1/8W
R31	1660101500	METAL GLA2E CHIP	100 OHM	5%	1/8W
R32	1660221500	METAL GLAZE CHIP	220 OHM	5%	1/8W
R33	1660331507	METAL GLAZE CHIP	330 OHM	5%	1/8W
R34	1660331507	METAL GLAZE CHIP	330 OHM	5%	1/8W
R35	1660330505	METAL GLAZE CHIP	33 OHM	5%	1/8W
R36	1660330505	METAL GLAZE CHIP	33 OHM	5%	1/8W
R37	1660122508	METAL GLAZE CHIP	1.2K OHM	5%	1/8W
R38	1662400300	METAL GLAZE CHIP	240 OHM	1%	1/8W
R39	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R40	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R41	1661501300	METAL GLAZE CHIP	1.5K OHM	1%	1/8W
R42	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R43	1660222502	METAL GLAZE CHIP	2.2K OHM	5%	1/8W
R44	1660101500	METAL GLA2E CHIP	100 OHM	5%	1/8W
—VARIABLE RESISTORS—					
VR1	1713102008	CERMET	1K OHM	10%	1/2W
—CAPACITORS—					
C2	2680221008	CERAMIC CHIP	220pF	10%	50V
C3	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V
C4	2680561002	CERAMIC CHIP	560pF	10%	50V
C5	2682101606	CERAMIC CHIP	100pF	10%	50V
C6	2680561002	CERAMIC CHIP	560pF	10%	50V
C7	2680820000	CERAMIC CHIP	82pF	10%	50V

C8	2682181600	CERAMIC CHIP	180pF	10%	50V
C9	2680221008	CERAMIC CHIP	220pF	10%	50V
C10	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V
C11	2680102000	CERAMIC CHIP	1000pF	10%	50V
C12	2682181600	CERAMIC CHIP	180pF	10%	50V
C13	2682272607	CERAMIC CHIP	2700pF	10%	50V
C14	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V
C15	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C16	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C17	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V
C18	2240101044	ELECTROLYTIC	100uF	20%	25V
C19	2240101044	ELECTROLYTIC	100uF	20%	25V
C20	2240101044	ELECTROLYTIC	100uF	20%	25V
C21	2240101044	ELECTROLYTIC	100uF	20%	25V
C22	2240101044	ELECTROLYTIC	100uF	20%	25V
C23	2240101044	ELECTROLYTIC	100uF	20%	25V
C25	2682050605	CERAMIC CHIP	5pF	10%	50V
C29	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C30	2682050605	CERAMIC CHIP	5pF	10%	50V
C31	2240220042	ELECTROLYTIC	22uF	20%	25V
C32	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C33	2240220042	ELECTROLYTIC	22uF	20%	25V
C34	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C35	2240220042	ELECTROLYTIC	22uF	20%	25V
C36	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C37	2680103002	CERAMIC CHIP	0.01uF	10%	50V
C38	2240220042	ELECTROLYTIC	22uF	20%	25V
C39	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C40	2240220042	ELECTROLYTIC	22uF	20%	25V
C41	2680104013	CERAMIC CHIP	0.1uF	80/-20%	50V
C42	2680220006	ELECTROLYTIC CHIP	22uF	10%	50V

-TRANSISTORS-

Q1	3032712014	NPN CHIP	2SC2712-G	
Q2	3032712014	NPN CHIP	2SC2712-G	
Q3	3011162006	PNP CHIP	2SA1162-G	
Q4	3011162006	PNP CHIP	2SA1162-G	
Q5	3033120006	NPN CHIP	2SC3120	
Q6	3032712014	NPN CHIP	2SC2712-G	
Q7	3032712014	NPN CHIP	2SC2712-G	
Q8	3032712014	NPN CHIP	2SC2712-G	
Q9	3032712014	NPN CHIP	2SC2712-G	
Q10	3032712014	NPN CHIP	2SC2712-G	
Q11	3011462017	PNP CHIP	2SA1462-T2B-Y33	

-DIODES-

D1	3123008003	ZENER CHIP	02CZ3.0-TE85L	3.0V
D2	3123018006	ZENER CHIP	02CZ11Y-TE85R	
D3	3123018006	ZENER CHIP	02CZ11Y-TE85R	
D4	3123020003	ZENER CHIP	02CZ9.1Y-TE85R	

-INTEGRATED CIRCUITS-

IC1	3205100007	MULTIPLIER	MC1495L
FB1	3890019005	FERRITE BEAD COIL	BL01RN1-A62

-COILS-

L2	3923279008	CHOKE COIL CHIP	2.7uH	20%

L3	3923279008	CHOKE COIL	CHIP	2.7uH	20%	
L4	3923229003	CHOKE COIL	CHIP	2.2uH	20%	
L5	3900804009	COIL		L-804		
L6	3900805001	COIL		L-805		
L7	3900806003	COIL		L-806		
L8	3900807005	COIL		L-807		
L9	3923278006	CHOKE COIL	CHIP	0.27uH	20%	
—CONNECTORS—						
J1	4310151008	CONNECTOR		SML 010		
J2	4310151008	CONNECTOR		SML 010		
TP1	4384003006	TP TERMINAL		LC-2-S(ORANGE)		
TP2	4384003006	TP TERMINAL		LC-2-S(ORANGE)		
P1	4413004010	XH CONNECTOR TOP	ENTRY	B4B-XH-A		
P2	4413002016	XH CONNECTOR SIDE	ENTRY	B2B-XH-A		

*** SWEEP BOARD T-5231 ***

—RESISTORS—						
R1	1652702309	METAL GLAZE	CHIP	27K OHM	1%	1/10W
R2	1658201303	METAL GLAZE	CHIP	8.2K OHM	1%	1/10W
R5	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R6	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R7	1650472508	METAL GLAZE	CHIP	4.7K OHM	5%	1/10W
R8	1650101503	METAL GLAZE	CHIP	100 OHM	5%	1/10W
R9	1654701309	METAL GLAZE	CHIP	4.7K OHM	1%	1/10W
R11	1656201301	METAL GLAZE	CHIP	6.2K OHM	1%	1/10W
R12	1651602309	METAL GLAZE	CHIP	16K OHM	1%	1/10W
R13	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R14	1651001303	METAL GLAZE	CHIP	1K OHM	1%	1/10W
R15	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R19	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R20	1651102309	METAL GLAZE	CHIP	11K OHM	1%	1/10W
R21	1651001303	METAL GLAZE	CHIP	1K OHM	1%	1/10W
R23	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
—CAPACITORS—						
C3	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C4	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C5	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C6	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C7	2681101600	CERAMIC	CHIP	100pF	10%	50V
—TRANSISTORS—						
Q1	3032712005	NPN	CHIP	2SC2712-O or Y		
Q2	3032712005	NPN	CHIP	2SC2712-O or Y		
Q3	3011162015	PNP	CHIP	2SA1162-O or Y		
Q4	3031621006	NPN	CHIP	2SC1621-3 or 4		
Q6	3011162015	PNP	CHIP	2SA1162-O or Y		
Q7	3011162015	PNP	CHIP	2SA1162-O or Y		
Q8	3011162015	PNP	CHIP	2SA1162-O or Y		
Q9	3032712005	NPN	CHIP	2SC2712-O or Y		
—DIODES—						
D1	3113002004	DETECTOR	CHIP	MA151WK DUAL		
—INTEGRATED CIRCUITS—						

IC2	3191105008	OP AMP DUAL	SOP	uPC812G2		
IC3	3191105008	OP AMP DUAL	SOP	uPC812G2		
−CONNECTORS−						
P1	4413520009	SB CONNECTOR		MB20P-90-24		
−MISCELLANEOUS−						
TP1	4384003006	TP TERMINAL		LC-2-S(ORANGE)		
TP2	4384003006	TP TERMINAL		LC-2-S(ORANGE)		

***** CHROMA REF BOARD T-5232 *****

−RESISTORS−						
R51	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R52	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R53	1650102505	METAL GLAZE	CHIP	1K OHM	5%	1/10W
R55	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R56	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R57	1650472508	METAL GLAZE	CHIP	4.7K OHM	5%	1/10W
R58	1657509305	METAL GLAZE	CHIP	75 OHM	1%	1/10W
R59	1650102505	METAL GLAZE	CHIP	1K OHM	5%	1/10W
R60	1659100303	METAL GLAZE	CHIP	910 OHM	1%	1/10W
R61	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R62	1650102505	METAL GLAZE	CHIP	1K OHM	5%	1/10W
R64	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R65	1651000301	METAL GLAZE	CHIP	100 OHM	1%	1/10W
−CAPACITORS−						
C50	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C51	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C52	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
C53	2681104808	CERAMIC	CHIP	0.1uF	80/-20%	50V
−TRANSISTORS−						
Q50	3032712005	NPN	CHIP	2SC2712-O or Y		
Q51	3032712005	NPN	CHIP	2SC2712-O or Y		
Q52	3032712005	NPN	CHIP	2SC2712-O or Y		
Q53	3032712005	NPN	CHIP	2SC2712-O or Y		
−INTEGRATED CIRCUITS−						
IC50	3191105008	OP AMP DUAL	SOP	uPC812G2		
−MISCELLANEOUS−						
P50	4413515006	SB CONNECTOR		MB15P-90-24		

***** Y REF BOARD T-5234 *****

−RESISTORS−						
R101	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R102	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R103	1650472508	METAL GLAZE	CHIP	4.7K OHM	5%	1/10W
R107	1651002305	METAL GLAZE	CHIP	10K OHM	1%	1/10W
R108	1657509305	METAL GLAZE	CHIP	75 OHM	1%	1/10W
R109	1659100303	METAL GLAZE	CHIP	910 OHM	1%	1/10W
R110	1650222505	METAL GLAZE	CHIP	2.2K OHM	5%	1/10W
R111	1650102505	METAL GLAZE	CHIP	1K OHM	5%	1/10W

R112	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R113	1650101503	METAL GLAZE CHIP	100 OHM	5%	1/10W
R114	1653901301	METAL GLAZE CHIP	3.9K OHM	1%	1/10W
R115	1650103507	METAL GLAZE CHIP	10K OHM	5%	1/10W
R116	1658202305	METAL GLAZE CHIP	82K OHM	1%	1/10W
R117	1655602303	METAL GLAZE CHIP	56K OHM	5%	1/10W
R118	1650222505	METAL GLAZE CHIP	2.2K OHM	5%	1/10W
R119	1657509305	METAL GLAZE CHIP	75 OHM	1%	1/10W
R120	1653601309	METAL GLAZE CHIP	3.6K OHM	1%	1/10W
—CAPACITORS—					
C100	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C101	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C103	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C105	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
—TRANS5ST6RS—					
Q100	3032712005	NPN CHIP	2SC2712-O or Y		
Q103	3032712005	NPN CHIP	2SC2712-O or Y		
Q104	3032712005	NPN CHIP	2SC2712-O or Y		
Q105	3032712005	NPN CHIP	2SC2712-O or Y		
—INTEGRATED CIRCUITS—					
IC100	3191105008	OP AMP DUAL SOP	uPC812G2		
—MISCELLANEOUS—					
P100	4413515006	SB CONNECTOR	MB15P-90-24		

***** SYNC REF BOARD T-5235 *****

—RESISTORS—					
R351	1651002305	METAL GLAZE CHIP	10K OHM	1%	1/10W
R352	1651002305	METAL GLAZE CHIP	10K OHM	1%	1/10W
R354	1651002305	METAL GLAZE CHIP	10K OHM	1%	1/10W
R355	1651002305	METAL GLAZE CHIP	10K OHM	1%	1/10W
R358	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R359	1650102505	METAL GLAZE CHIP	1K OHM	5%	1/10W
R363	1654700307	METAL GLAZE CHIP	470 OHM	5%	1/10W
R364	1650103507	METAL GLAZE CHIP	10K OHM	5%	1/10W
R365	1658201303	METAL GLAZE CHIP	8.2K OHM	1%	1/10W
R366	1659100303	METAL GLAZE CHIP	910 OHM	1%	1/10W
—CAPACITORS—					
C350	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C353	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C356	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
C357	2681104808	CERAMIC CHIP	0.1uF	80/-20%	50V
—TRANSISTORS—					
Q354	3032712005	NPN CHIP	2SC2712-O or Y		
—INTEGRATED CIRCUITS—					
IC350	3191105008	OP AMP DUAL SOP	uPC812G2		
—MISCELLANEOUS—					
P350	4413511008		MB11P-90-24		

*** BUFFER BOARD T-5237 ***

−RESISTORS−						
R536	1650101503	METAL GLAZE	CHIP	100 OHM	5%	1/10W
R537	1000222007	CARBON FILM		2.2K OHM	5%	1/6W
R538	1650151508	METAL GLAZE	CHIP	150 OHM	5%	1/10W
R539	1650101503	METAL GLAZE	CHIP	100 OHM	5%	1/10W
R540	1000222007	CARBON FILM		2.2K OHM	5%	1/6W
R541	1650151508	METAL GLAZE	CHIP	150 OHM	5%	1/10W
R542	1650101503	METAL GLAZE	CHIP	100 OHM	5%	1/10W
R543	1000222007	CARBON FILM		2.2K OHM	5%	1/6W
R544	1650151508	METAL GLAZE	CHIP	150 OHM	5%	1/10W
R545	1650101503	METAL GLAZE	CHIP	100 OHM	5%	1/10W
R546	1000222007	CARBON FILM		2.2K OHM	5%	1/6W
R547	1650151508	METAL GLAZE	CHIP	150 OHM	5%	1/10W

−TRANSISTORS−			
Q514	3011015012	PNP	2SA1015-Y
Q515	3031815018	NPN	2SC1815-Y
Q516	3011015012	PNP	2SA1015-Y
Q517	3031815018	NPN	2SC1815-Y
Q518	3011015012	PNP	2SA1015-Y
Q519	3031815018	NPN	2SC1815-Y
Q520	3011015012	PNP	2SA1015-Y
Q521	3031815018	NPN	2SC1815-Y

−MISCELLANEOUS−			
FB504	3890017001	FERRITE BEAD	L1RH0303 H=1
FB505	3890017001	FERRITE BEAD	L1RH0303 H=1
FB506	3890017001	FERRITE BEAD	L1RH0303 H=1
FB507	3890017001	FERRITE BEAD	L1RH0303 H=1
FB508	3890017001	FERRITE BEAD	L1RH0303 H=1
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